

Group II  
glycyrrhetinic  
acid

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Search Results - Record(s) 1 through 1 of 1 returned.

☐ 1. Document ID: US 3944660 A

L12: Entry 1 of 1File: USPTMar 16, 1976

US-PAT-NO: 3944660  
DOCUMENT-IDENTIFIER: US 3944660 A

TITLE: Pharmaceutical composition

DATE-ISSUED: March 16, 1976

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gottfried; Siegfried	Ilford			EN
Baxendale; Lily	London			EN

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Biorex Laboratories, Limited	London			EN	03

APPL-NO: 05/ 419487  
DATE FILED: November 28, 1973

PARENT-CASE:

This application generally relates to subject matter which is similar to that disclosed in applicants' copending application Ser. No. 419,486, filed Nov. 28, 1973.

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
UK	58354/72	December 18, 1972

INT-CL: [02] A61K 9/46, A61K 47/00, A61K 33/06, A61K 31/19

US-CL-ISSUED: 424/44; 424/43, 424/154, 424/155, 424/156, 424/157, 424/158, 424/161, 424/308

US-CL-CURRENT: 424/44; 424/43, 424/601, 424/683, 424/690, 424/717, 514/557

FIELD-OF-SEARCH: 424/43, 424/44, 424/154-158, 424/308, 424/161

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
3444290	May 1969	Wai	424/4
3764618	October 1973	Bonati	260/448R

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
628,444	August 1963	BE	
296,176	April 1964	ES	

OTHER PUBLICATIONS

Chem. Abst. 60 P 14550f (1964).  
Chem. Abst. 63 D 8135g (1965).  
Chem. Abst. 71:122296n (1969)(abst. of Laurence et al. Symp. Carbenoxolone Sodium 1967 (pub. 1968) pp. 217-223 "Three-month Assessment of Duogastrone Therapy in Chronic Duodenal Ulcer.")]

ART-UNIT: 125

PRIMARY-EXAMINER: Rose; Shep K.

ABSTRACT:

There is provided a pharmaceutical composition in dosage unit form comprising (a) 1 - 100 mg. of glycyrrhetic acid and/or of at least one anti-inflammatory active derivative thereof, in admixture with (b) 1 - 50% by weight of alginic acid and/or at least one non-toxic salt thereof and/or of at least one carboxyalkyl-cellulose and/or of at least one non-toxic salt thereof, (c) 1 - 30% by weight of at least one non-toxic carbonate and/or bicarbonate and (d) 0 - 30% by weight of at least one antacid compound.

11 Claims, 0 Drawing figures

FullTitle

CLS.1

SEQ.1

ATT.1

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Term	Documents
"3944660".USPT.	1
"3944660".PN.USPT.	1
(3944660.PN.).USPT.	1

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## WEST

*Group II  
glycyrrhizin oil  
mouth wash*

☐

L10: Entry 44 of 55

File: USPT

Sep 27, 1983

US-PAT-NO: 4406882

DOCUMENT-IDENTIFIER: US 4406882 A

TITLE: Pharmaceutical composition for treating diseases of the oral cavity

DATE-ISSUED: September 27, 1983

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Turner; John C.	London			GB2
Baxendale; Lily	Hertfordshire			GB2

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Biorex Laboratories Limited				GB2	03

APPL-NO: 06/ 342706 [PALM]

DATE FILED: January 25, 1982

## FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
GB	8103789	February 6, 1981

INT-CL: [03] A61K 7/16, A61K 7/22, A61K 7/24

US-CL-ISSUED: 424/49; 424/54, 424/55

US-CL-CURRENT: 424/49; 424/54, 424/55

FIELD-OF-SEARCH: 424/49-58

PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	<u>3944660</u>	March 1976	Gottfried et al.	424/44

## FOREIGN PATENT DOCUMENTS

7.0 in the axillary vault. The pH of the invention composition is in the range from 9.0 to 10.0 and activity would not be observed until normal skin pH is restored. The composition relies more specifically on its surfactant qualities and dry feel than antibacterial potential. Glyceryl monolaurate is present in the formulation in a range of about 0.1 to 0.6 percent by weight, and preferably in a range of about 0.38 to 0.42 percent by weight.

#### Detailed Description Text (8):

Lichen extract also acts to reduce micrococci and diphtheroids. The active component in lichen extract is usnic acid. Usnic acid and its metal salt, sodium usnate, are potent, gram positive specific antibacterial compounds. The typical usnate content found in lichen extract is around 5.0%. A one percent level of lichen extract represents only 0.05% sodium usnate. Part for part, sodium usnate is as powerful as triclosan. Usnic acid is a dibenzofuran derivative and, in the metal salt form, it is readily soluble in water. It inhibits mitosis and cell respiration and easily permeates the cell wall of most gram positive bacteria. Due to its relatively high solubility in water, an emollient is typically provided to hold it on the skin. Sodium usnate has a typical minimum inhibitory count (MIC) of 0.002% and a minimal germicidal concentration (MGC) of 0.1%. The lichen extract would then have an MIC of 0.04 and an MGC of 2.0%. The zone of inhibition for lichen extract is about 40 mm. Lichen extract is present in the formulation in a range of about 1.0 to 6.0 percent by weight, and preferably in a range of about 1.8 to 2.2 percent by weight.

#### Detailed Description Paragraph Table (1):

	Glycerin 50.00%	Chamomile Tea 33.95%	Sodium Stearate 5.00%	Witch Hazel 3.50%	Aloe Vera 3.50%	<u>Lichen Extract</u> 2.00%	Oat Flour 1.25%	Coriander Oil 0.40%	Glyceryl Monolaurate 0.40%
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#### Other Reference Publication (1):

Cosmetochem Product Information article, Deo-Usnate, Dr. Marina Fontana, Apr. 1974.

#### CLAIMS:

a. about 1% to 6% Lichen Extract;

2. The stick deodorant composition of claim 1 containing Lichen Extract in the range of about 1.8% to 2.2%, by weight based upon total weight of the composition.

3. The stick deodorant composition of claim 2 containing about 2.0% by weight (based upon total weight of the composition) Lichen Extract.

f. about 1% to 6% Lichen Extract;

19. The stick deodorant composition of claim 8 containing Lichen Extract in the range of about 1.8% to 2.2%, by weight based upon total weight of the composition.

20. The stick deodorant composition of claim 19 containing about 2.0% by weight (based upon total weight of the composition) Lichen Extract.

## OTHER PUBLICATIONS

Chem. Abst. 86-165836r, (1977), 66-26462q, (1967).

Chem. Abst. 64-7224h, (1966), +64-11587h, (1966).

Chem. Abst., 9th Coll. Silj. Index, Chem. Substance, pp. 2002cs+6995cs.

ART-UNIT: 125

PRIMARY-EXAMINER: Friedman; Stanley J.

## ABSTRACT:

Valuable pharmaceutical properties of flavylum salts are described, including anti-inflammatory, vaso-protective, hypolipaemic, hypocholesterolaemic and hypoglycaemic activity. The use of flavylum salts as drugs and the production of pharmaceutical compositions containing them is particularly referred to.

5 Claims, 0 Drawing figures

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L7: Entry 11 of 14

File: JPAB

Aug 30, 1994

DOCUMENT-IDENTIFIER: JP 06239730 A

TITLE: WHITENING COSMETIC

Abstract (2):

CONSTITUTION: A deproteinized material of serum is blended with glabridin. When the deproteinized material of serum alone is blended with other cosmetic raw materials, the feeling of use is not satisfied, though the resultant cosmetic has an antiinflammation effect. When glabridin alone which is hydrophobic ingredients of *Glycyrrhiza glabra* L. is blended with other cosmetic raw materials, it is confirmed to have antimicrobial action, antioxidation action, anticarious action, antiplasmin action and melanogenesis suppressing action, but the feeling of use not satisfied, though the whitening effect is excellent. The blend amount of the deproteinized material of serum is preferably 0.001-3.0wt.% as dried solid amount based on the total amount of cosmetic and the blend amount of glabridin is preferably 0.001-1.0wt.% based on the total amount.

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L7: Entry 12 of 14

File: JPAB

Dec 3, 1993

DOCUMENT-IDENTIFIER: JP 05320152 A

TITLE: GLABRIDIN DERIVATIVEAbstract (1):

PURPOSE: To provide a new compound useful as pharmaceuticals such as antibacterial agent and an external agent for suppressing melanogenesis.

Abstract (2):

CONSTITUTION: The compound of formula (R is 3-19C saturated or unsaturated straight or branched-chain hydrocarbon group), e.g. glabridin undecylenic acid diester. The compound can be produced by condensing glabridin to a specific straight or branched-chain 4-20C fatty acid in an organic solvent (e.g. chloroform) using N,N-dicyclohexylcarbodiimide or 4-dimethylaminopyridine. The compound is colorless transparent oil having excellent solubility in alcohols, etc.

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## End of Result Set



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L7: Entry 14 of 14

File: DWPI

Oct 22, 1996

DERWENT-ACC-NO: 1997-006247

DERWENT-WEEK: 199701

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TITLE: Glabridin prodn, providing steady supply of glabridin for industrial scale - comprises incubating formed callus from glabridin-producing glycyrrhiza species in liq culture medium

Basic Abstract Text (1):

Prodn. of glabridin (I) comprises applying glabridin-producing species of glycyrrhiza to tissue culture on agar medium to form callus; further incubating callus in liq. culture medium; and recovering glabridin from culture broth.

Basic Abstract Text (2):

Also claimed is (A) prodn. of glabridin comprising applying glabridin-prod using species of glycyrrhiza to tissue culture on agar medium to form callus; further incubating callus in liq. medium contg. nitrate nitrogen and ammoniacal nitrogen at ratio of 100:0 or 50:50; and recovering glabridin from the culture broth; and (B) prodn. of glabridin by adding yeast extract to above liq. medium 2-8 weeks after start of incubation so that extract content in medium is 0.01-5.0 wt. %.

Basic Abstract Text (3):

USE/ADVANTAGE - (I) is known to antimicrobial action, antioxidant action and tyrosinase-inhibiting action (JP 6-8249). Provides new process for producing glabridin utilising callus cultivation. No importation of glycyrrhiza is needed since glabridin can be produced by callus of glycyrrhiza which can be multiplied by tissue culture. Glabridin content in callus is higher than that of natural glycyrrhiza, and steady supply of glabridin is possible on industrial scale.



**WEST****End of Result Set**

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L8: Entry 2 of 2

File: USPT

US-PAT-NO: 5609875

DOCUMENT-IDENTIFIER: US 5609875 A

TITLE: Skin whitening composition

DATE-ISSUED: March 11, 1997

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hadas; Nira	Ramat-Gan			IL

US-CL-CURRENT: 424/757; 424/401, 424/62, 514/557, 514/844

## CLAIMS:

I claim:

1. A skin whitening cosmetic composition which also prevents formation of dark skin spots, which composition comprises in combination an oil soluble extract selected from the group consisting of an oil soluble extract of Glycyrrhiza glabra and an oil soluble extract of a plant species related thereto, together with a compound selected from the group consisting of alpha-hydroxy acids, beta-hydroxy acids, keto-acids amides thereof, ammonium salts thereof, inorganic salts thereof and esters thereof, wherein said composition is effective for whitening skin and for preventing formation of dark spots on skin when applied to the skin.

2. A composition according to claim 1, where the oil soluble plant extract is extracted from roots of Glycyrrhiza glabra.

3. A cosmetic composition according to claim 1, where the acid is selected from the group consisting of glycolic acid, lactic acid, malic acid, citric acid, Pyruvic acid, Tartaric acid, Salicylic acid, glucuronic acid, 2-hydroxy isobutyric acid, ethyl and methyl pyruvate.

4. A cosmetic composition according to claim 1, where the content of acid is between about 0.1% wt. and about 8% wt.

5. A cosmetic composition according to claim 1, which contains from

about 0.05% wt to about 5 wt. % of concentrated plant extract.

6. A cosmetic composition according to claim 5, which contains from 0.05 wt. % to 0.2 wt. % concentrated plant extract.

7. A composition according to claim 1, further comprising at least one member selected from the group consisting of UVA filters, UVB filters, Vitamin E, Vitamin E derivatives, Vitamin C and Vitamin C derivatives.

8. A composition according to claim 1, wherein the Glycyrrhiza glabra extract contains about 10% glabridin, and the composition contains about 0.05% to about 3% of the extract.

9. A method for whitening human skin and for preventing formation of dark skin spots which comprises (1) applying to the skin an effective quantity for whitening human skin and for preventing formation of dark skin spots of a cosmetic composition comprising in combination an oil soluble plant extract of Glycyrrhiza glabra or related plant species, together with a member selected from the group consisting of alphahydroxy acids, beta-hydroxy acids, karo-acids, amides thereof, ammonium salts thereof, inorganic salts thereof and esters thereof, and (2) repeating step (1) as required for effectiveness.

10. A method according to claim 8, where the composition contains from about 0.05 wt. % to about 5 wt. % of the plant extract.

**WEST****End of Result Set**

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L8: Entry 2 of 2

File: USPT

DOCUMENT-IDENTIFIER: US 5609875 A

TITLE: Skin whitening composition

Brief Summary Text (6):

The composition of the invention comprise in combination extracts of the root of Glycyrrhiza glabra or associated species in a powder form which contain approx. 10% of glabridine which are effective in reducing melanin synthesis by inhibiting tyrosinase activity, together with alpha or beta hydroxy or keto acids.

**CLAIMS:**

8. A composition according to claim 1, wherein the Glycyrrhiza glabra extract contains about 10% glabridin, and the composition contains about 0.05% to about 3% of the extract.

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## End of Result Set



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L8: Entry 2 of 2

File: USPT

Mar 11, 1997

US-PAT-NO: 5609875

DOCUMENT-IDENTIFIER: US 5609875 A

TITLE: Skin whitening composition

DATE-ISSUED: March 11, 1997

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hadas; Nira	Ramat-Gan			IL

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Fischer Pharmaceuticals Ltd.	Ramat Gan			IL	03

APPL-NO: 08/ 402445 [PALM]

DATE FILED: March 13, 1995

## FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
IL	109012	March 17, 1994

INT-CL: [06] A61 K 35/78, A61 K 7/135, A61 K 6/00

US-CL-ISSUED: 424/195.1; 424/62, 424/401, 514/557, 514/844

US-CL-CURRENT: 424/757; 424/401, 424/62, 514/557, 514/844

FIELD-OF-SEARCH: 424/195.1, 424/401, 424/62, 514/557, 514/844

## PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

Search Selected

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	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	<u>5164185</u>	November 1992	Charpin et al.	424/401
<input type="checkbox"/>	<u>5420106</u>	June 1995	Parab	514/2

## OTHER PUBLICATIONS

Chem Absts. 90(1):6570r, 1979.

ART-UNIT: 188

PRIMARY-EXAMINER: Rollins; John W.

ABSTRACT:

Cosmetic skin whitening compositions based on the combination of plant extracts and alpha-, beta-hydroxy or keto acids, amides, ammonium salts, other inorganic salts and esters of these. The compositions may also contain one or more of UVA filters, UVB filters, derivatives of vitamin E, Vitamin C or its derivatives. The compositions may contain conventional additives. A preferred plant extract is that of licorice (*Glycyrrhiza Glabra*) and of related plant species. Such compositions also prevent to a large extent formation of skin spots.

10 Claims, 0 Drawing figures

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L10: Entry 45 of 55

File: USPT

DOCUMENT-IDENTIFIER: US 4376781 A

TITLE: Pharmaceutical compositions

## Detailed Description Paragraph Table (14):

Freeze-dried injectable solution 3,4'-dihydroxyflavylium chloride 15 mg Excipients (mannite, sodium chloride, sodium ethylene diamino tetraacetate, thiourea) q.s. to 125 mg Solvent: double-distilled water (pyrogen-free) 3 ml Capsules 3-hydroxyflavylium chloride 50 mg Excipients (mannite, citric acid, sodium chloride, thiourea, sodium ethylene diamino tetraacetate, lactose, methyl cellulose, magnesium stearate) q.s. to 200 mg Capsules 3,4'-dihydroxyflavylium chloride 100 mg Excipients (mannite, citric acid, sodium chloride, thiourea, sodium ethylene diamino tetraacetate, lactose, methyl cellulose, magnesium stearate) q.s. to 250 mg Tablets 3,4'-dihydroxyflavylium chloride 25 mg Excipients (maize starch, lactose, citric acid, magnesium stearate, thiourea, sugar, talc, gum arabic, magnesium carbonate) q.s. to 200 mg Freeze-dried injectable solution 3,7-dihydroxyflavylium chloride 25 mg Excipients (mannite, sodium chloride, sodium ethylene diamino tetraacetate, thiourea) q.s. to 125 mg Solvent: double-distilled water (pyrogen-free) 3 ml Ointment 3,5,7-trihydroxy-3'4'5'-trimethoxyflavylium chloride 0.25 g Excipients (cetyl alcohol, saturated vegetable trigly- cerides, esters of polyethylene glycol 2000 with fatty acids C.sub.12 -C.sub.14, Tween 80, para-oxy benzoates, sorbitol, carboxy vinyl polymer, sodium sulphite, triethanolamine, lecithin, purified water, lactic acid) q.s. to 100 g Dentifrice gel 3,5,7-trihydroxy-3'4'5'-trimethoxyflavylium chloride 0.125 g Excipients (carboxyvinyl polymer, sorbitol, propylene glycol, sodium sulphite, ethyl alcohol, para-oxy ben- zoates, sodium lauryl sulphate) q.s. to 100 g Capsules Elder anthocyanidines (containing 20% cyanidine) 125 mg Excipients (mannite, citric acid, sodium chloride, thiourea, sodium ethylene diamino tetraacetate, lactose, methyl cellulose, magnesium stearate) q.s. to 250 mg Freeze-dried injectable solution Cyanidine 15 mg Excipients (mannite, sodium chloride, sodium ethylene diamino tetraacetate, thiourea) q.s. to 125 mg Solvent: double-distilled water (pyrogen-free) 3 ml Freeze-dried injectable solution Bilberry anthocyanidines (50% by weight) 25 mg Excipients (mannite, sodium chloride, sodium ethylene diamino tetraacetate, thiourea) q.s. to 125 mg Solvent: double-distilled water (pyrogen-free) 3 ml Capsules Grape anthocyanidines (25% by weight) 100 mg Excipients (mannite, citric acid, sodium chloride, thiourea, sodium ethylene diamino tetraacetate, lactose, methyl cellulose, magnesium stearate) q.s. to 200 mg Tablets Grape anthocyanidines (60% by weight) 35 mg Excipients (maize starch, lactose, citric acid, magne- sium stearate, thiourea, sugar, talc, gum arabic, ma- gnesium carbonate) q.s. to 200 mg Ointment Bilberry anthocyanidines (50% by weight) 0.5 g Excipients (cetyl alcohol, saturated vegetable trigly- cerides, esters of polyethylene glycol 2000 with fatty acids C.sub.12 -C.sub.14, Tween 80, para-oxy benzoates, sorbitol, carboxy vinyl polymer, sodium sulphite, triethanolamine, lecithin, purified water, lactic acid) q.s. to 100 g Ointment Elder anthocyanidines (containing 20% cyanidine) 1 g Excipients (cetyl alcohol, saturated vegetable trigly- cerides, esters of polyethylene glycol 2000 with fatty acids C.sub.12 -C.sub.14, Tween 80, para-oxybenzoates, sorbitol, carboxyvinyl polymer, sodium sulphite, triethanolamine, lecithin, purified water, lactic acid) q.s. to 100 g Dentifrice gel Bilberry anthocyanidines (35% by weight) 0.5 g Excipients (carboxyvinyl polymer, sorbitol, propylene glycol, sodium sulphite, ethyl alcohol, para-oxy ben- zoates, sodium lauryl sulphate) q.s. to 100 g Dentifrice paste Grape anthocyanidines (60% by weight) 0.5 g Excipients (citric acid, sodium bisulphite, sorbitol, ammonium glycyrrhizinate, maize starch, glycerin, paraoxy benzoates, titanium dioxide, calcium phosphate, sodium lauryl sulphate, flavourings, purified water) q.s. to 100 g

## CLAIMS:

13. A composition according to claim 11 in the form of a dentifrice.

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L10: Entry 45 of 55

File: USPT

Mar 15, 1983

US-PAT-NO: 4376781

DOCUMENT-IDENTIFIER: US 4376781 A

TITLE: Pharmaceutical compositions

DATE-ISSUED: March 15, 1983

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Lietti; Andrea	Milan			IT
Bonati; Attilio	Milan			IT

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Inverni Della Beffa S.p.A.	Milan			IT	03

APPL-NO: 05/ 881892 [PALM]

DATE FILED: February 27, 1978

INT-CL: [03] A61K 31/35

US-CL-ISSUED: 424/283

US-CL-CURRENT: 514/456; 514/866, 514/926, 514/927

FIELD-OF-SEARCH: 424/283

PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

Search Selected

Search ALL

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	<u>3462455</u>	August 1969	Kramer et al.	424/283
<input type="checkbox"/>	<u>3495009</u>	February 1970	Tronche	424/283
<input type="checkbox"/>	<u>3546250</u>	December 1970	Kramer	424/283
<input type="checkbox"/>	<u>3689663</u>	September 1972	Kramer et al.	424/283

## OTHER PUBLICATIONS

The Merck Index, Ninth Edition, (1976), pp. 350, 926 and 377.  
Powers, J. J. et al., Food Technology, 14, 626-632, (1960).  
Chem. Abst., 86: 165836r, (1977).  
Chem. Abst., 66: 26462q, (1967).  
Chem. Abst., 64: 7224b, (1966).  
Chem. Abst., 64: 11587h, (1966).

Chem. Abst., 9th Coll. Subj. Index, Chem. Substance, pp. 7002CS+6995CS.

ART-UNIT: 125

PRIMARY-EXAMINER: Friedman; Stanley J.

ABSTRACT:

Valuable pharmaceutical properties of flavylum salts are described, including anti-inflammatory, vaso-protective, hypolipaemic, hypocholesterolaemic and hypoglycaemic activity. The use of flavylum salts as drugs and the production of pharmaceutical compositions containing them is particularly referred to.

22 Claims, 0 Drawing figures



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L10: Entry 43 of 55

File: USPT

DOCUMENT-IDENTIFIER: US 4413004 A

TITLE: Pharmaceutical compositions

Detailed Description Paragraph Table (14):

Freeze-dried injectable solution 3,4'-dihydroxyflavylium chloride 15 mg Excipients (mannite, sodium chloride, sodium ethylene diamino tetraacetate, thiourea) q.s. to 125 mg Solvent: double-distilled water (pyrogen-free) 3 ml Capsules 3-hydroxyflavylium chloride 50 mg Excipients (mannite, citric acid, sodium chloride, thiourea, sodium ethylene diamino tetraacetate, lactose, methyl cellulose, magnesium stearate) q.s. to 200 mg Capsules 3,4'-dihydroxyflavylium chloride 100 mg Excipients (mannite, citric acid, sodium chloride, thiourea, sodium ethylene diamino tetraacetate, lactose, methyl cellulose, magnesium stearate) q.s. to 250 mg Tablets 3,4'-dihydroxyflavylium chloride 25 mg Excipients (maize starch, lactose, citric acid, -magnesium stearate, thiourea, sugar, talc, gum arabic, magnesium carbonate) q.s. to 200 mg Freeze-dried injectable solution 3,7-dihydroxyflavylium chloride 25 mg Excipients (mannite, sodium chloride, sodium ethylene diamino tetraacetate, thiourea) q.s. to 125 mg Solvent: double-distilled water (pyrogen-free) 3 ml Ointment 3,5,7-trihydroxy-3'4'5'-trimethoxyflavylium chloride 0.25 g Excipients (cetyl alcohol, saturated vegetable trigly- cerides, esters of polyethylene glycol 2000 with fatty acids C.sub.12 -C.sub.14, Tween 80, para-oxy benzoates, sorbitol, carboxy vinyl polymer, sodium sulphite, triethanol- amine, lecithin, purified water, lactic acid) q.s. to 100 g Dentifrice gel 3,5,7-trihydroxy-3'4',5'-trimethoxyflavylium chloride 0.125 g Excipients (carboxyvinyl polymer, sorbitol, propylene glycol, sodium sulphite, ethyl alcohol, para-oxy ben- zoates, sodium lauryl sulphate) q.s. to 100 g Capsules Elder anthocyanidines (containing 20% cyanidine) 125 mg Excipients (mannite, citric acid, sodium chloride, thiourea, sodium ethylene diamino tetraacetate, lactose, methyl cellulose, magnesium stearate) q.s. to 250 mg Freeze-dried injectable solution Cyanidine 15 mg Excipients (mannite, sodium chloride, sodium ethylene diamino tetraacetate, thiourea) q.s. to 125 mg Solvent: double-distilled water (pyrogen-free) 3 ml Freeze-dried injectable solution Bilberry anthocyanidines (50% by weight) 25 mg Excipients (mannite, sodium chloride, sodium ethylene diamino tetraacetate, thiourea) q.s. to 125 mg Solvent: double-distilled water (pyrogen-free) 3 ml Capsules Grape anthocyanidines (25% by weight) 100 mg Excipients (mannite, citric acid, sodium chloride, thiourea, sodium ethylene diamino tetraacetate, lactose, methyl cellulose, magnesium stearate) q.s. to 200 mg Tablets Grape anthocyanidines (60% by weight) 35 mg Excipients (maize starch, lactose, citric acid, magne- sium stearate, thiourea, sugar, talc, gum arabic, ma- gnesium carbonate) q.s. to 200 mg Ointment Bilberry anthocyanidines (50% by weight) 0.5 g Excipients (cetyl alcohol, saturated vegetable trigly- cerides, esters of polyethylene glycol 2000 with fatty acids C.sub.12 -C.sub.14, Tween 80, para-oxy benzoates, sorbitol, carboxy vinyl polymer, sodium sulphite, triethanolami- ne, lecithin purified water, lactic acid) q.s. to 100 g Ointment Elder anthocyanidines (containing 20% cyanidine) 1 g Excipients (cetyl alcohol, saturated vegetable trigly- cerides, esters of polyethylene glycol 2000 with fatty acids C.sub.12 -C.sub.14, Tween 80, para-oxybenzoates, sorbitol, carboxyvinyl polymer, sodium sulphite, triethanol- amine, lecithin, purified water, lactic acid) q.s. to 100 g Dentifrice gel Bilberry anthocyanidines (35% by weight) 0.5 g Excipients (carboxyvinyl polymer, sorbitol, propylene glycol, sodium sulphite, ethyl alcohol, para-oxy ben- zoates, sodium lauryl sulphate) q.s. to 100 g Dentifrice paste Grape anthocyanidines (60% by weight) 0.5 g Excipients (citric acid, sodium bisulphite, sorbitol, ammonium glycyrrhizinate, maize starch, glycerin, para-oxy benzoates, titanium dioxide, calcium phosphate, sodium lauryl sulphate, flavourings, purified water) q.s. to 100 g

**WEST**

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L10: Entry 43 of 55

File: USPT

Nov 1, 1983

US-PAT-NO: 4413004

DOCUMENT-IDENTIFIER: US 4413004 A

TITLE: Pharmaceutical compositions

DATE-ISSUED: November 1, 1983

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Lietti; Andrea	Milan			IT
Bonati; Attilio	Milan			IT

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Inverni Della Beffa S.p.A.	Milan			IT	03

APPL-NO: 06/ 445075 [PALM]

DATE FILED: November 29, 1982

## PARENT-CASE:

The present application is a division of application Ser. No. 881,892, filed Feb. 27, 1978 now U.S. Pat. No. 4,376,781, which in turn was a continuation-in-part of application Ser. No. 829,913, filed Sept. 1, 1977, now abandoned.

## FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
GB	37252/76	September 8, 1976

INT-CL: [03] A61K 31/35

US-CL-ISSUED: 424/283

US-CL-CURRENT: 514/456; 514/866, 514/926, 514/927

FIELD-OF-SEARCH: 424/253

PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

Search Selected

Search ALL

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	<u>3462445</u>	August 1969	Kramer et al.	424/283
<input type="checkbox"/>	<u>3495009</u>	February 1970	Tronche	424/283
<input type="checkbox"/>	<u>3546250</u>	December 1970	Kramer	424/283
<input type="checkbox"/>	<u>3689663</u>	September 1972	Kramer	424/283

## WEST

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L10: Entry 44 of 55

File: USPT

US-PAT-NO: 4406882

DOCUMENT-IDENTIFIER: US 4406882 A

TITLE: Pharmaceutical composition for treating diseases of the oral cavity

DATE-ISSUED: September 27, 1983

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Turner; John C.	London			GB2
Baxendale; Lily	Hertfordshire			GB2

US-CL-CURRENT: 424/49, 424/54, 424/55

## CLAIMS:

We claim:

1. A water-soluble or water-dispersible particulate composition comprising:

per one part by weight of at least one glycyrrhetinic acid derivative selected from the group consisting of glycyrrhetinic acid hemiesters and the salts thereof and the esters of glycyrrhetinic acid and of 3-O-acyl derivatives of glycyrrhetinic acid, 10 to 100 parts by weight of at least one compound selected from the group consisting of lactose and sorbitol, 10 to 50 parts by weight of at least one buffer selected from the group consisting of sodium citrate, potassium citrate, sodium tartrate, potassium tartrate, sodium malate and potassium malate and 0.1 to 10 parts by weight of disodium edetate.

2. A pharmaceutical composition according to claim 1, comprising:

per one part by weight of glycyrrhetinic acid derivative, 30 to 80 parts by weight of at least one compound selected from the group consisting of lactose and sorbitol, 15 to 25 parts by weight of buffer and 0.3 to 1 part by weight of disodium edetate.

3. A pharmaceutical composition according to claim 1, which additionally comprises at least one member from the group consisting of coloring materials and flavoring materials.

4. A pharmaceutical composition according to claim 1, wherein the glycyrrhetic acid derivative is the disodium salt of glycyrrhetic acid hemisuccinate, the disodium salt of mono-(glycyrrhet-3-yl)-cis-cyclohexane-1,2-dicarboxylic acid or cinnamyl glycyrrhetate.

5. A method of treating or preventing inflammatory and ulcerative diseases of the oral cavity in humans, which comprises washing the mouth of a human with an aqueous solution or dispersion of a pharmaceutical composition comprising:

per one part by weight of at least one glycyrrhetic acid derivative selected from the group consisting of glycyrrhetic acid hemiesters and the salts thereof and the esters of glycyrrhetic acid and 3-O-acyl derivatives of glycyrrhetic acid, 10 to 100 parts by weight of at least one compound selected from the group consisting of lactose and sorbitol, 10 to 50 parts by weight of at least one buffer selected from the group consisting of sodium citrate, potassium citrate, sodium tartrate, potassium tartrate, sodium malate and potassium malate and 0.1 to 10 parts by weight of disodium edetate.

6. A method according to claim 5, which comprises washing the mouth with a mouthwash prepared by dissolving or suspending 2 g. of a pharmaceutical composition comprising:

per one part by weight of at least one glycyrrhetic acid derivative selected from the group consisting of glycyrrhetic acid hemiesters and the salts thereof and the esters of glycyrrhetic acid and 3-O-acyl derivatives of glycyrrhetic acid, 10 to 100 parts by weight of at least one compound selected from the group consisting of lactose and sorbitol, 10 to 50 parts by weight of at least one buffer selected from the group consisting of sodium citrate, potassium citrate, sodium tartrate, potassium tartrate, sodium malate and potassium malate and 0.1 to 10 parts by weight of disodium edetate,

in 30 ml. of water.

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L10: Entry 44 of 55

File: USPT

DOCUMENT-IDENTIFIER: US 4406882 A

TITLE: Pharmaceutical composition for treating diseases of the oral cavity

Brief Summary Text (4):

Unfortunately, there are many common and widely spread inflammatory and ulcerative conditions of the oral cavity, including erosive lichen planus, recurrent ulceration of the aphtus and benign mucous membrane pemphigoid types and primary herpetic stomatitis, for which hitherto there has been no satisfactory treatment. Occasionally, in severe cases of primary herpetic stomatitis in immunologically suppressed patients, use has been made of a mouthwash containing idoxuridine but there is a natural reluctance to use this radiomimetic drug.

Brief Summary Text (5):

Consequently, it is an object of the present invention to provide a pharmaceutical composition which is to be used for making a mouthwash for the treatment of the above-mentioned diseases of the oral cavity and for prophylactic purposes in immunologically suppressed patients.

Brief Summary Text (9):

The selection of the constituent components of the new pharmaceutical compositions of the present invention is of paramount importance. Bulking agents which are conventionally used in tablet manufacture, such as starch and the like, would clearly be unsuitable because they are insoluble or substantially insoluble in water and thus could not be used for making up an aqueous solution for use as a mouthwash. The use of mono- and disaccharides, such as glucose and sucrose, which are also commonly used in tablet manufacture, is also contraindicated because of the known cariogenic activity of such materials. Most of the other known water-soluble and low molecular weight saccharides which might, in principle, be considered cannot be used because they are not readily available and/or are too expensive. Consequently, sorbitol and lactose are the only materials which satisfy the essential criteria of being water-soluble, readily available at an economic price and having a very low cariogenic activity.

Brief Summary Text (13):

Although the glycyrrhetic acid derivatives used according to the present invention are known to possess anti-inflammatory properties, it is surprising that they also exert a dramatic healing action when used in a mouthwash, in which the contact time is very limited, for the treatment of hitherto intractable diseases, such as erosive lichen planus, pemphigoid types of ulceration, herpetic stomatitis and aphthous ulcers.

Brief Summary Text (15):

We have found that 30 ml. is an adequate volume for a single mouthwash and that approximately 2 g. of the pharmaceutical composition of the present invention is sufficient to provide the desired effect. Consequently, for ease of use, the composition is preferably packed in individual sealed sachets, each of which contains 2 g. of composition, a plurality of such sachets being packed in a larger container in order to provide an adequate course of treatment for a patient.

Brief Summary Text (16):

In order to obtain the desired effect, it is recommended that the patient cleans the mouth after breakfast, luncheon and before retiring at night and then swishes the mouthwash around the mouth for about 30 seconds, after which the mouthwash is spat out. It is recommended that, in order to obtain the maximum beneficial effect, no food or drink is consumed for at least 30 minutes after using the mouthwash.

Detailed Description Text (16):

The following Table summarizes the results obtained in a limited clinical trial using two different glycyrrhetic acid derivatives, namely, Viroxolone (the disodium salt of glycyrrhetic acid hemisuccinate) and Biociclone (the disodium salt of mono-(glycyrrhet-3-yl)-cis-cyclohexane-1,2-dicarboxylic acid). Other clinical trials which have been carried out clearly demonstrated that the mouthwash compositions according to the present invention bring about a dramatic healing and resolution of diseases of the oral cavity which have hitherto proved to be intractable. Thus, it has been demonstrated clinically that the pain and fever frequently associated with herpetic diseases of the oral cavity often disappear within the course of 24 to 48 hours, after which time visual manifestations of the diseases (lesions) are often no longer apparent.

Detailed Description Paragraph Table (6):

TABLE \_\_\_\_\_ num- ber of pa- preparation clinical status tients results

\_\_\_\_\_ Viroxolone aphthous 12 10/12 pain reduced mouthwash ulcer 1/12 no improvement 1/12 complete recurrence 1/12 coelic disease (recurred) 4/12 ulcers healed completely 1/12 pain-free but ulcers per- sisted Biociclone aphthous 7 7/7 pain reduced mouthwash ulcer 7/7 ulcers healed 1/7 herpetic origin 2/7 recurred 1/7 coeliac disease (recurred) 2/7 no recurrence with mainten- ance of treat- ment 1/7 recurrence even with maintenance of treatment Viroxolone chronic 7 1/7 less painful mouthwash erosive lesions, resol- lichen ed on main- planus tenance of therapy 3/7 mouth more com- fortable, lesions unchanged 1/7 pain-free in 1 week, lesions improved 1/7 mouth possibly less uncomfort- able, lesions unchanged 1/7 pain became more severe, withdrew Viroxolone acute radiation 1 more comfortable mouthwash mucositis in 48 hrs., resolved pain- lessly in 3 weeks \_\_\_\_\_

Other Reference Publication (3):

Dedieu et al., Chem. Abstr. 94: 361322 (1981) of Brit 1,567,307 May 14, 1980., Mouthwashes of Ammonium Glycyrrhizinate.

Other Reference Publication (8):

Beriou Chem. Abstr. 84: 49819x (1976) of Brit. 1,393,498 Ammonium Glycyrrhizate in Toothpaste.

Other Reference Publication (9):

Villette Chem. Abstr. 83: 65467r (1975) of Fr. Demande 2225146 Ammonium Glycyrrhizate in Dentifrice.

CLAIMS:

6. A method according to claim 5, which comprises washing the mouth with a mouthwash prepared by dissolving or suspending 2 g. of a pharmaceutical composition comprising:

**WEST***Group I usnic acid*

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L1: Entry 69 of 85

File: DWPI

Feb 24, 1988

DERWENT-ACC-NO: 1988-051358

DERWENT-WEEK: 198808

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TITLE: Controlling dental caries and plaque formation - using usnic acid having specific bacteriostatic action against Streptococcus mutans

INVENTOR: FERRARI, G; GHIONE, M ; GHIRADI, P

PATENT-ASSIGNEE: ISCOFAR SAS GHIRARD (ISCON)

PRIORITY-DATA: 1986IT-0020902 (June 25, 1986)

## PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
EP 256566 A	February 24, 1988	E	014	
AU 8774440 A	January 7, 1988		000	
DE 3774361 G	December 12, 1991		000	
DK 8703217 A	December 26, 1987		000	
EP 256566 B	November 16, 1991		000	
IT 1204901 B	March 10, 1989		000	
JP 63008330 A	January 14, 1988		000	
PT 85163 A	July 1, 1988		000	
ZA 8704549 A	January 18, 1988		000	

DESIGNATED-STATES: AT BE CH DE ES FR GB GR IT LI LU NL SE AT BE CH DE ES FR GB GR IT LI LU NL SE

CITED-DOCUMENTS: 5.Jnl.Ref; FR 2081338 ; JP45002749 ; JP56666111 ; US 4139609

## APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
EP 256566A	June 12, 1987	1987EP-0201124	
ZA 8704549A	June 24, 1987	1987ZA-0004549	

INT-CL (IPC): A61K 7/26; A61K 31/34; A61L 0/00; C07D 307/91; C12N 0/00

ABSTRACTED-PUB-NO: EP 256566A

## BASIC-ABSTRACT:

The use of usnic acid (I; 4,8-diacetyl-3,7-dihydroxy-2,9a-dimethyl-9-oxo-9 H-dibenzofuran), or its derivs., for treating dental caries and for treating or preventing cariogenic dental plaque is new.

(I) can be used as an optically active, esp. (+), isomer or as a racemate, esp. in the form of a natural extract.

USE - (I) has already been described as an antibacterial, antitumour, antispastic, antihistamine, antiinflammatory, and local anaesthetic agent. It is now found to have specific bacteriostatic activity against Streptococcus mutans.

ABSTRACTED-PUB-NO: EP 256566B

## EQUIVALENT-ABSTRACTS:

Use of usnic acid for the preparation of compositions for oral use suitable for the therapeutical control of dental caries and for the preventive treatment and for the therapy of cariogenic dental plaque.

(12pp)

CHOSEN-DRAWING: Dwg.0/2

DERWENT-CLASS: B02 D21 P34

CPI-CODES: B06-A03; B12-A01; B12-C02; B12-D06; B12-D07; B12-E02; B12-G07; B12-L03; D08-A05;



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L1: Entry 69 of 85

File: DWPI

Feb 24, 1988

DERWENT-ACC-NO: 1988-051358

DERWENT-WEEK: 198808

COPYRIGHT 2002 DERWENT INFORMATION LTD

TITLE: Controlling dental caries and plaque formation - using usnic acid having specific bacteriostatic action against Streptococcus mutansBasic Abstract Text (1):

The use of usnic acid (I; 4,8-diacetyl-3,7-dihydroxy-2,9a-dimethyl-9-oxo-9 H-dibenzofuran), or its derivs., for treating dental caries and for treating or preventing cariogenic dental plaque is new.

Equivalent Abstract Text (1):

Use of usnic acid for the preparation of compositions for oral use suitable for the therapeutical control of dental caries and for the preventive treatment and for the therapy of cariogenic dental plaque.

Standard Title Terms (1):

CONTROL DENTAL CARIES PLAQUE FORMATION USNIC ACID SPECIFIC BACTERIA ACTION STREPTOCOCCUS MUTANS

**WEST**

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L1: Entry 52 of 85

File: EPAB

Feb 24, 1988

PUB-NO: EP000256566A1

DOCUMENT-IDENTIFIER: EP 256566 A1

TITLE: Use of usnic acid or derivatives thereof in the treatment of dental caries.

PUBN-DATE: February 24, 1988

## INVENTOR-INFORMATION:

NAME

COUNTRY

FERRARI, GIORGIO

GHIONE, MARIO

GHIRARDI, PAOLO

INT-CL (IPC): A61K 7/26; A61K 7/16

EUR-CL (EPC): A61K007/16; A61K007/26, A61K031/34

## ABSTRACT:

CHG DATE=19990617 STATUS=O> The compositions containing usnic acid or its derivatives are useful for the therapeutical control of the dental caries, particularly for the preventive treatment and for the care of the cariogenic dental plaque. The usnic acid, especially in the dextrorotatory form, is active as specific bacteriostatic against Streptococcus mutans which is the primary pathogenic microorganism of cariogenic lesions. The compositions for the treatment of dental caries contain usnic acid in concentrations of between 5 mcg and 100 mg per ml or per g and include tooth pastes, mouthwashes, material for the dental medications and for the treatment of the oral cavity in the several pharmaceutical and hygienic-antiseptic forms.

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L1: Entry 52 of 85

File: EPAB

Feb 24, 1988

PUB-NO: EP000256566A1

DOCUMENT-IDENTIFIER: EP 256566 A1

TITLE: Use of usnic acid or derivatives thereof in the treatment of dental caries.

PUBN-DATE: February 24, 1988

## INVENTOR-INFORMATION:

NAME

COUNTRY

FERRARI, GIORGIO

GHIONE, MARIO

GHIRARDI, PAOLO

## ASSIGNEE-INFORMATION:

NAME

COUNTRY

ISCOFAR SAS

IT

APPL-NO: EP87201124

APPL-DATE: June 12, 1987

PRIORITY-DATA: IT02090286A (June 25, 1986)

INT-CL (IPC): A61K 7/26; A61K 7/16

EUR-CL (EPC): A61K007/16; A61K007/26, A61K031/34

## ABSTRACT:

CHG DATE=19990617 STATUS=O> The compositions containing usnic acid or its derivatives are useful for the therapeutical control of the dental caries, particularly for the preventive treatment and for the care of the cariogenic dental plaque. The usnic acid, especially in the dextrorotatory form, is active as specific bacteriostatic against Streptococcus mutans which is the primary pathogenic microorganism of cariogenic lesions. The compositions for the treatment of dental caries contain usnic acid in concentrations of between 5 mcg and 100 mg per ml or per g and include tooth pastes, mouthwashes, material for the dental medications and for the treatment of the oral cavity in the several pharmaceutical and hygienic-antiseptic forms.

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L1: Entry 52 of 85

File: EPAB

Feb 24, 1988

DOCUMENT-IDENTIFIER: EP 256566 A1

TITLE: Use of usnic acid or derivatives thereof in the treatment of dental caries.Abstract (1):

CHG DATE=19990617 STATUS=O> The compositions containing usnic acid or its derivatives are useful for the therapeutical control of the dental caries, particularly for the preventive treatment and for the care of the cariogenic dental plaque. The usnic acid, especially in the dextrorotatory form, is active as specific bacteriostatic against Streptococcus mutans which is the primary pathogenic microorganism of cariogenic lesions. The compositions for the treatment of dental caries contain usnic acid in concentrations of between 5 mcg and 100 mg per ml or per g and include tooth pastes, mouthwashes, material for the dental medications and for the treatment of the oral cavity in the several pharmaceutical and hygienic-antiseptic forms.

**WEST**Group I "usnea sp."

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see Claim 7

L3: Entry 1 of 2

File: USPT

US-PAT-NO: 6264926

DOCUMENT-IDENTIFIER: US 6264926 B1

TITLE: Formulation useful as a natural herbal tooth powder

DATE-ISSUED: July 24, 2001

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Farooqi; Alaul Hasan Abad	U.P.			IN
Sharma; Srikant	U.P.			IN
Khan; Asifudulla	U.P.			IN
Kumar; Raghubind	U.P.			IN
Kumar; Sushil	U.P.			IN

US-CL-CURRENT: 424/58; 424/49, 424/756, 424/769, 424/771

## CLAIMS:

What is claimed is:

1. A synergistic composition comprising the pastes or powders of Zanthoxylum sp., Zingiber officinale, Sandalwood, Roasted alum, Common salt, Spilanthes sp., Pistacia sp., Quercus sp., Usnea sp. in the proportion of 20-25%, 25-30%, 8.25-8.5%, 8-9%, 15-16%, 2-2.5%, 2-2.5%, 8-8.5%, and 1-4% respectively.
2. A composition as claimed in claim 1, wherein the powder of Zanthoxylum armatum is obtained from its flowers, leaves, roots or fruits.
3. A composition as claimed in claim 1, wherein the ginger powder is extracted from the rhizome, stem or leaves of Zingiber officinale.
4. A composition as claimed in claim 1, wherein the Sandalwood powder used is obtained from Sandalwood hard wood or soft wood.
5. A composition as claimed in claim 1, wherein the paste or powder of Spilanthes calva is obtained from the flowers or plants.
6. A composition as claimed in claim 1, wherein the powder of

*Quercus infectoria* is obtained from the gallnuts.

7. A formulation as claimed in claim 1, wherein the Usnea powder is obtained from Usnea longissima lichens. ←

8. A composition as claimed in claim 1, wherein the resinous exudate *Pistacia lentiscus* is used.

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L3: Entry 1 of 2

File: USPT

Jul 24, 2001

US-PAT-NO: 6264926

DOCUMENT-IDENTIFIER: US 6264926 B1

TITLE: Formulation useful as a natural herbal tooth powder

DATE-ISSUED: July 24, 2001

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Farooqi; Alaul Hasan Abad	U.P.			IN
Sharma; Srikant	U.P.			IN
Khan; Asifudulla	U.P.			IN
Kumar; Raghubind	U.P.			IN
Kumar; Sushil	U.P.			IN

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Council of Scientific and Industrial Research	New Delhi			IN	03

APPL-NO: 09/ 268334 [PALM]

DATE FILED: March 16, 1999

## FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
IN	240/Del/1999	February 12, 1999

INT-CL: [07] A61 K 7/26, A61 K 35/78

US-CL-ISSUED: 424/58; 424/195.1, 424/49

US-CL-CURRENT: 424/58; 424/49, 424/756, 424/769, 424/771

FIELD-OF-SEARCH: 424/98, 424/195.1, 424/58

## PRIOR-ART-DISCLOSED:

## OTHER PUBLICATIONS

Almas et al., World Health Forum, 16:206-210 (1995).  
Chopra et al., Glossary of Indian Medicinal Plants (1956).  
Manandhar, J. Econ. Tax. Bot., 12:408-413 (1997).  
Rao et al., Ethnobot, 8:88-91 (1996).  
Rispler-Chaim V, J. Royal Asiatic Soc., V2:13-20 (1992) (abstract).  
Sushil Kumar et al., Medicinal Plants in Skin Care, CIMAP, 76-89 (1994).  
Farooqi et al., J. Med. Arom. Pl. Sci, 20:411-450 (1998).  
Wealth of India, vol. 6, p. 90 (1994).  
Wealth of India, vol. 8, pp. 351-352 (1994).  
Wealth of India, vol. 9, p. 218 (1994).

ART-UNIT: 164

PRIMARY-EXAMINER: Rose; Shep K.

ABSTRACT:

The present invention relates to a formulation of herbal toothpowder or toothpaste for gums and teeth, which comprises of powder or paste of *Zanthoxylum armatum* (20-25%), *Zingiber officinale* (25-30%), *Santalum album* (8.25-8.5%), *Spilanthes calva* (2.0-2.5%), *Pistacia lentiseus* (2.0-2.5%), *Quercus infectoria* (8.0-8.5%), *Usnea longissima* (1-4%), as well as roasted alum and common salt.

8 Claims, 0 Drawing figures



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Group I *usnic acid*

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L1: Entry 54 of 85

File: DWPI

Dec 24, 2001

DERWENT-ACC-NO: 2002-114484

DERWENT-WEEK: 200227

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TITLE: New disinfective preparation for treatment of inflammation of upper respiratory tract and oral cavity comprises usnic acid sodium salt and essential oils of sage, fennel, thyme or peppermint

INVENTOR: DJORDJEVIC, I; KOCIC, Z ; STANKOVIC, S

PATENT-ASSIGNEE: AD ZDRAVLJE FARMACEUTSKO HEMIJSKA IND (ADZDN)

PRIORITY-DATA: 2000YU-0000373 (June 15, 2000)

## PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
AU 200112552 A	December 24, 2001		000	A61K031/343
WO 200195900 A1	December 20, 2001	E	021	A61K031/343

DESIGNATED-STATES: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW

## APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
AU 200112552A	November 3, 2000	2001AU-0012552	
AU 200112552A		WO 200195900	Based on
WO 200195900A1	November 3, 2000	2000WO-YU00022	

INT-CL (IPC): A61 K 31/34; A61 K 31/343; A61 K 35/78; A61 P 31/02; A61 K 35/78; A61 K 31:34

ABSTRACTED-PUB-NO: WO 200195900A

## BASIC-ABSTRACT:

NOVELTY - A disinfective preparation comprises (%) usnic acid sodium salt (0.001 - 0.15) and *Salvia officinalis* L. (sage), *Foeniculum vulgare* L. (fennel), *Thymus vulgaris* L. (thyme) or *Mentha piperita* L. (peppermint) essential oil (0.001 - 0.4) along with the usual pharmaceutical additives.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

(1) preparing chewable tablets with usnic acid sodium salt and essential oil of sage (a), fennel (b), thyme (c), peppermint (d) or menthol (e) involving: either

(i) weighing glucose, preparing a granulation agent solution separately, adding the usnic acid sodium salt;

(ii) granulating glucose by dispersing the solution;

(iii) drying the granulate to humidity of 5 - 30%, cooling the granulate, adding the essential oil ethanolic solution of (a), (b), (c), (d) or (e);

(iv) drying the granulate to humidity of 22%; and

(v) adding sliding agent for homogenization and converting the granulate into pharmaceutical form; or

(2) dissolving the usnic acid sodium salt in water; adding carboxypolymethylene, stirring the mixture to homogenization and keeping it for swelling for 7 - 21 hours; adding a neutralizing agent such as sodium hydroxide slowly with stirring and subsequently adding to the gel-mass the essential oil ethanolic solution of (a), (b), (c), (d) or (e), and d) adding color solution;

(3) preparing aerosol with usnic acid sodium salt and essential oil of (a), (b), (c), (d) and (e) involving:

(i) dissolving in ethanol usnic acid sodium salt, essential oil of (a), (b), (c), (d) or (e);

(ii) adding water, glycerine and color solution; and

(iii) adding pressure gas; and

(4) preparing aromatic antiseptic liquid for disinfection with usnic acid sodium salt and essential oil of (a), (b), (c), (d) and (e) involving:

(i) dissolving in water ethanol usnic acid sodium salt;

(ii) adding glycerine and color solution; and

(iii) adding essential oil of (a), (b), (c), (d) and (e) to the prepared solution.

ACTIVITY - Antiinflammatory; Antibacterial; Antifungal.

MECHANISM OF ACTION - None given.

USE - As a disinfective agent for external use in treatment of inflammation of the upper respiratory tract and oral cavity caused by the action of pathogenic microorganisms.

ADVANTAGE - The disinfectant preparation is reliable, simple as the antimicrobial action of the usnic acid sodium salt and essential oil is neither reduced nor lost.

ABSTRACTED-PUB-NO: WO 200195900A

EQUIVALENT-ABSTRACTS:

CHOSEN-DRAWING: Dwg.0/0

DERWENT-CLASS: B04 D22

CPI-CODES: B12-M01; B12-M07; B12-M11B; B14-A01; B14-A04; B14-C03; B14-K01; B14-R01; D09-A01B;

(iii) adding pressure gas; and .

(4) preparing aromatic antiseptic liquid for disinfection with usnic acid sodium salt and essential oil of (a), (b), (c), (d) and (e) involving:

(i) dissolving in water ethanol usnic acid sodium salt;

(ii) adding glycerine and color solution; and

(iii) adding essential oil of (a), (b), (c), (d) and (e) to the prepared solution.

ACTIVITY - Antiinflammatory; Antibacterial; Antifungal.

MECHANISM OF ACTION - None given.

USE - As a disinfective agent for external use in treatment of inflammation of the upper respiratory tract and oral cavity caused by the action of pathogenic microorganisms.

ADVANTAGE - The disinfectant preparation is reliable, simple as the antimicrobial action of the usnic acid sodium salt and essential oil is neither reduced nor lost.

ABSTRACTED-PUB-NO: WO 200195900A

EQUIVALENT-ABSTRACTS:

CHOSEN-DRAWING: Dwg.0/0

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L1: Entry 54 of 85

File: DWPI

Dec 24, 2001

DERWENT-ACC-NO: 2002-114484

DERWENT-WEEK: 200227

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TITLE: New disinfective preparation for treatment of inflammation of upper respiratory tract and oral cavity comprises usnic acid sodium salt and essential oils of sage, fennel, thyme or peppermint

INVENTOR: DJORDJEVIC, I; KOCIC, Z ; STANKOVIC, S

PRIORITY-DATA: 2000YU-0000373 (June 15, 2000)

## PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
AU 200112552 A	December 24, 2001		000	A61K031/343
WO 200195900 A1	December 20, 2001	E	021	A61K031/343

INT-CL (IPC): A61 K 31/34; A61 K 31/343; A61 K 35/78; A61 P 31/02; A61 K 35/78; A61 K 31:34

ABSTRACTED-PUB-NO: WO 200195900A

## BASIC-ABSTRACT:

NOVELTY - A disinfective preparation comprises (%) usnic acid sodium salt (0.001 - 0.15) and *Salvia officinalis* L. (sage), *Foeniculum vulgare* L. (fennel), *Thymus vulgaris* L. (thyme) or *Mentha piperita* L. (peppermint) essential oil (0.001 - 0.4) along with the usual pharmaceutical additives.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

(1) preparing chewable tablets with usnic acid sodium salt and essential oil of sage (a), fennel (b), thyme (c), peppermint (d) or menthol (e) involving: either

(i) weighing glucose, preparing a granulation agent solution separately, adding the usnic acid sodium salt;

(ii) granulating glucose by dispersing the solution;

(iii) drying the granulate to humidity of 5 - 30%, cooling the granulate, adding the essential oil ethanolic solution of (a), (b), (c), (d) or (e);

(iv) drying the granulate to humidity of 22%; and

(v) adding sliding agent for homogenization and converting the granulate into pharmaceutical form; or

(2) dissolving the usnic acid sodium salt in water; adding carboxypolymethylene, stirring the mixture to homogenization and keeping it for swelling for 7 - 21 hours; adding a neutralizing agent such as sodium hydroxide slowly with stirring and subsequently adding to the gel-mass the essential oil ethanolic solution of (a), (b), (c), (d) or (e), and d) adding color solution;

(3) preparing aerosol with usnic acid sodium salt and essential oil of (a), (b), (c), (d) and (e) involving:

(i) dissolving in ethanol usnic acid sodium salt, essential oil of (a), (b), (c), (d) or (e);

(ii) adding water, glycerine and color solution; and

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L1: Entry 54 of 85

File: DWPI

Dec 24, 2001

DERWENT-ACC-NO: 2002-114484

DERWENT-WEEK: 200227

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TITLE: New disinfective preparation for treatment of inflammation of upper respiratory tract and oral cavity comprises usnic acid sodium salt and essential oils of sage, fennel, thyme or peppermint

Basic Abstract Text (1):

NOVELTY - A disinfective preparation comprises (%) usnic acid sodium salt (0.001 - 0.15) and Salvia officinalis L. (sage), Foeniculum vulgare L. (fennel), Thymus vulgaris L. (thyme) or Mentha piperita L. (peppermint) essential oil (0.001 - 0.4) along with the usual pharmaceutical additives.

Basic Abstract Text (3):

(1) preparing chewable tablets with usnic acid sodium salt and essential oil of sage (a), fennel (b), thyme (c), peppermint (d) or menthol (e) involving: either

Basic Abstract Text (4):

(i) weighing glucose, preparing a granulation agent solution separately, adding the usnic acid sodium salt;

Basic Abstract Text (9):

(2) dissolving the usnic acid sodium salt in water; adding carboxypolymethylene, stirring the mixture to homogenization and keeping it for swelling for 7 - 21 hours; adding a neutralizing agent such as sodium hydroxide slowly with stirring and subsequently adding to the gel-mass the essential oil ethanolic solution of (a), (b), (c), (d) or (e), and d) adding color solution;

Basic Abstract Text (10):

(3) preparing aerosol with usnic acid sodium salt and essential oil of (a), (b), (c), (d) and (e) involving:

Basic Abstract Text (11):

(i) dissolving in ethanol usnic acid sodium salt, essential oil of (a), (b), (c), (d) or (e);

Basic Abstract Text (14):

(4) preparing aromatic antiseptic liquid for disinfection with usnic acid sodium salt and essential oil of (a), (b), (c), (d) and (e) involving:

Basic Abstract Text (15):

(i) dissolving in water ethanol usnic acid sodium salt;

Basic Abstract Text (21):

ADVANTAGE - The disinfectant preparation is reliable, simple as the antimicrobial action of the usnic acid sodium salt and essential oil is neither reduced nor lost.

Standard Title Terms (1):

NEW PREPARATION TREAT INFLAMMATION UPPER RESPIRATION TRACT ORAL CAVITY COMPRISE USNIC ACID SODIUM SALT ESSENTIAL OIL SAGE FENNEL THYME PEPPERMINT

WEST

GROUP II

glabridin  
antimicrobial

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L7: Entry 10 of 14

File: JPAB

Oct 22, 1996

PUB-NO: JP408275792A

DOCUMENT-IDENTIFIER: JP 08275792 A

TITLE: PRODUCTION OF GLABRIDIN

PUBN-DATE: October 22, 1996

## INVENTOR-INFORMATION:

NAME

COUNTRY

TAMURA, KOKICHI

ODA, MAYUMI

## ASSIGNEE-INFORMATION:

NAME

COUNTRY

MARUZEN PHARMACEUT CO LTD

APPL-NO: JP07104564

APPL-DATE: April 6, 1995

INT-CL (IPC): C12 P 17/18; C07 D 493/04; C12 N 5/04; A61 K 35/78; C12 N 9/99

## ABSTRACT:

PURPOSE: To stably obtain a glabridin useful as an antimicrobial agent, an antioxidizing agent, a beautifully whitening agent, etc., by subjecting Glycyrrhiza glabra L. having a glabridin-producing property to a tissue culture treatment in an agar culture medium, further culturing the formed callus in a liquid, and subsequently collecting the product from the culture product.

CONSTITUTION: A method for producing glabridin comprises sterilizing the tissue piece, such as leaf, of Glycyrrhiza glabra L. having a glabridin-producing property, subjecting the sterilized tissue piece to a standing tissue culture treatment in an agar medium containing benzyladenine, naphthyl acetic acid and sucrose at 25°C in a dark place for 1 month, collecting calluses formed on the culture medium, charging the collected calluses into a liquid culture medium, subjecting the charged calluses to a 180 rpm rotation shaking culture treatment in a dark place at 25°C for 4 weeks, centrifugally collecting the culture cells, immersing the collected cultured cells in methanol at 50°C for 24hrs, concentrating and drying the extract under vacuum, dissolving the dried product in methanol, and subsequently purifying the product with a silica gel column. The objective glabridin having an antimicrobial action, an antioxidizing action and a tyrosinase-inhibiting action is thus obtained.

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L7: Entry 10 of 14

File: JPAB

Oct 22, 1996

DOCUMENT-IDENTIFIER: JP 08275792 A

TITLE: PRODUCTION OF GLABRIDINAbstract (1):

PURPOSE: To stably obtain a glabridin useful as an antimicrobial agent, an antioxidizing agent, a beautifully whitening agent, etc., by subjecting *Glycyrrhiza glabra* L. having a glabridin-producing property to a tissue culture treatment in an agar culture medium, further culturing the formed callus in a liquid, and subsequently collecting the product from the culture product.

Abstract (2):

CONSTITUTION: A method for producing glabridin comprises sterilizing the tissue piece, such as leaf, of *Glycyrrhiza glabra* L. having a glabridin-producing property, subjecting the sterilized tissue piece to a standing tissue culture treatment in an agar medium containing benzyladenine, naphthyl acetic acid and sucrose at 25°C in a dark place for 1 month, collecting calluses formed on the culture medium, charging the collected calluses into a liquid culture medium, subjecting the charged calluses to a 180 rpm rotation shaking culture treatment in a dark place at 25°C for 4 weeks, centrifugally collecting the culture cells, immersing the collected cultured cells in methanol at 50°C for 24hrs, concentrating and drying the extract under vacuum, dissolving the dried product in methanol, and subsequently purifying the product with a silica gel column. The objective glabridin having an antimicrobial action, an antioxidizing action and a tyrosinase-inhibiting action is thus obtained.

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L7: Entry 10 of 14

File: JPAB

Oct 22, 1996

PUB-NO: JP408275792A

DOCUMENT-IDENTIFIER: JP 08275792 A

TITLE: PRODUCTION OF GLABRIDIN

PUBN-DATE: October 22, 1996

## INVENTOR-INFORMATION:

NAME

COUNTRY

TAMURA, KOKICHI

ODA, MAYUMI

INT-CL (IPC): C12 P 17/18; C07 D 493/04; C12 N 5/04; A61 K 35/78; C12 N 9/99

## ABSTRACT:

PURPOSE: To stably obtain a glabridin useful as an antimicrobial agent, an antioxidizing agent, a beautifully whitening agent, etc., by subjecting *Glycyrrhiza glabra* L. having a glabridin-producing property to a tissue culture treatment in an agar culture medium, further culturing the formed callus in a liquid, and subsequently collecting the product from the culture product.

CONSTITUTION: A method for producing glabridin comprises sterilizing the tissue piece, such as leaf, of *Glycyrrhiza glabra* L. having a glabridin-producing property, subjecting the sterilized tissue piece to a standing tissue culture treatment in an agar medium containing benzyladenine, naphthyl acetic acid and sucrose at 25°C in a dark place for 1 month, collecting calluses formed on the culture medium, charging the collected calluses into a liquid culture medium, subjecting the charged calluses to a 180 rpm rotation shaking culture treatment in a dark place at 25°C for 4 weeks, centrifugally collecting the culture cells, immersing the collected cultured cells in methanol at 50°C for 24hrs, concentrating and drying the extract under vacuum, dissolving the dried product in methanol, and subsequently purifying the product with a silica gel column. The objective glabridin having an antimicrobial action, an antioxidizing action and a tyrosinase-inhibiting action is thus obtained.

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L10: Entry 37 of 55

File: USPT

Aug 27, 1985

US-PAT-NO: 4537763

DOCUMENT-IDENTIFIER: US 4537763 A

TITLE: Products sweetened with .alpha.-glycosyl glycyrrhizin

DATE-ISSUED: August 27, 1985

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Miyake; Toshio	Okayama			JP
Hijiya; Hiromi	Okayama			JP

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Kabushiki Kaisha Hayashibara Seibutsu Kagaku Kenkyujo	Okayama			JP	03

APPL-NO: 06/ 387651 [PALM]

DATE FILED: June 11, 1982

## FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
JP	56-95714	June 20, 1981

INT-CL: [03] A61K 7/16, A23L 1/236, C12P 19/18, C07H 3/00

US-CL-ISSUED: 424/49; 426/548, 426/549, 426/590, 426/650, 426/660, 426/658, 426/804, 435/97, 536/18.1, 424/64

US-CL-CURRENT: 424/49; 424/64, 426/548, 426/549, 426/590, 426/650, 426/658, 426/660, 426/804, 435/97, 536/18.1

FIELD-OF-SEARCH: 426/18, 426/48, 426/49, 426/52, 426/548, 426/655, 426/804, 426/658, 435/97, 424/180, 424/283, 536/18.1, 542/402

## PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

Search Selected

Search ALL

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	<u>3878191</u>	April 1975	Fukumoto et al.	426/548
<input type="checkbox"/>	<u>3923598</u>	December 1975	Horikoshi	
<input type="checkbox"/>	<u>3988206</u>	October 1976	Shiosaka	
<input type="checkbox"/>	<u>4135977</u>	January 1979	Horikoshi	
<input type="checkbox"/>	<u>4219571</u>	August 1980	Miyake	426/48
<input type="checkbox"/>	<u>4393200</u>	July 1983	Miyashita et al.	536/18.1

## FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
49-7227	February 1974	JP	426/548
0043659	March 1982	JP	426/52
0086266	May 1982	JP	
1390065	April 1975	GB	

## OTHER PUBLICATIONS

Inglett, George E.; Symposium: Sweeteners, AVI Publishing Co., Inc., Westport, Conn., 1974, Chs. 19 & 20.  
Chemical Abstracts, 57000t, vol. 83, p. 359 (1975).  
Bender, H., "Cyclodextrin-Glucanotransferase von Klebsiella pneumoniae", Arch. Microbiol., 111, pp. 271, 282 (1971).

ART-UNIT: 132

PRIMARY-EXAMINER: Jones; Raymond N.

ASSISTANT-EXAMINER: Weimar; Elizabeth C.

## ABSTRACT:

New .alpha.-glycosyl glycyrrhizins bearing two or more .alpha.-glucose residues are prepared. Such .alpha.-glycosylation is carried out by subjecting an aqueous solution of glycyrrhizin (or a salt thereof) and an amylaceous substance (e.g. ~~starch~~ or cyclodextrin) to the enzymatic action of an .alpha.-glycosyl transferase (e.g. cyclodextrin glucanotrasferase). The .alpha.-glycosyl glycyrrhizins are low-caloric, low-cariogenic, mild, non-bitter, non-lingering sweeteners which may be advantageously incorporated into foods, beverages, ~~cosmetics~~, dentifrices and drugs.

13 Claims, 1 Drawing figures

## WEST

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L10: Entry 37 of 55

File: USPT

US-PAT-NO: 4537763

DOCUMENT-IDENTIFIER: US 4537763 A

TITLE: Products sweetened with .alpha.-glycosyl glycyrrhizin

DATE-ISSUED: August 27, 1985

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Miyake; Toshio	Okayama			JP
Hijiya; Hiromi	Okayama			JP

US-CL-CURRENT: 424/49; 424/64, 426/548, 426/549, 426/590, 426/650, 426/658, 426/660, 426/804, 435/97, 536/18.1

## CLAIMS:

We claim:

1. In an orally usable product containing a sweetening or flavoring amount of a sweetening or flavoring agent, the improvement wherein said sweetening or flavoring agent comprises .alpha.-glycosyl glycyrrhizin.

2. An orally usable product in accordance with claim 1, wherein said product is selected from the group consisting of dentifrice, medicine, cosmetic, troche, cod liver oil drop, gargle and oral refreshing agent.

3. An orally usable product in accordance with claim 1, wherein the product is a food product.

4. A food product in accordance with claim 3, in liquid form.

5. A food product in accordance with claim 3, in pastè form.

6. A food product in accordance with claim 3, in solid form.

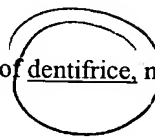
7. A food product in accordance with claim 3, wherein said food product is a low-cariogenic food product.

8. A food product in accordance with claim 3, wherein said food product is a low-caloric food product.

9. A food product in accordance with claim 3, wherein said food product is a seasoning.
10. A food product in accordance with claim 3, wherein said food product is a confectionery.
11. A food product in accordance with claim 3, wherein said food product is a bakery product.
12. A food product in accordance with claim 3, wherein said food product is a beverage.
13. A food product in accordance with claim 3, wherein said food product is a sweetener.

## CLAIMS:

2. An orally usable product in accordance with claim 1, wherein said product is selected from the group consisting of dentifrice, medicine, cosmetic, troche, cod liver oil drop, gargle and oral refreshing agent.



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L10: Entry 37 of 55

File: USPT

DOCUMENT-IDENTIFIER: US 4537763 A

TITLE: Products sweetened with .alpha.-glycosyl glycyrrhizin

Brief Summary Text (4):

Glycyrrhizin is a sweet substance, obtained by subjecting root and/or stolon of a perennial plant, Licorice (*Glycyrrhiza glabra* Linne var. *glandulifera* Regal et Herder or *Glycyrrhiza uralensis* Fishey) of family Leguminosae, to an extraction with water, whose molecular structure is of the following glycyrrhizic acid or glycyrrhizinate, which has been widely used as a sweetener from the ancient history. ##STR1##

Brief Summary Text (19):

In addition to foods and drinks in general, the term "food products", as used in the SPECIFICATION, includes all products wherein taste is an important factor, e.g., drinks, such as liquors and soft drinks; foods, such as seasonings, confectioneries, pickles and pickled products; feeds, pet foods; cosmetics, such as lipstick, lipcream and dentrifrice; and drugs, such as those for internal administration, gargle.

Brief Summary Text (50):

Furthermore, the sweetener is favorably usable as a low-cariogenic sweetener because it is less fermentable by oral dental-caries causative microorganisms; for example, low-cariogenic food products, such as confectioneries including chewing gum, chocolate, biscuit, cookie, toffee and candy; and soft drinks including cola drinks, cider, juice, coffee and yogurt drinks. In addition to the above described uses, the sweetener is favorably usable for sweetening drugs and cosmetics, e.g., gargle or dentrifice, with much less fear of causing dental-caries.

Brief Summary Text (51):

Additionally, the taste of the present sweetener containing .alpha.-glycosyl glycyrrhizin well harmonizes with the sour-, salty-, bitter-, astringent- and/or delicious tasting substances used in various food products, as well as being highly heat- and acid-resistant. Thus, it is favourably usable for seasoning various food products, in general, in addition to the hereinbefore described special uses; for example, seasonings, such as soy sauce, soy sauce powder, soy paste, soy paste powder, dressings, mayonnaise, vinegar, powder vinegar, extracts for Chinese-style foods, sauce, catsup, curry roux, extracts for stew and soup, mixed seasoning, and table syrup; bakery products and confectioneries, such as rice cake, jerry, castella, bread, biscuit, cracker, cookie, pie, pudding, butter cream, custard cream, shoux cream, waffle, sponge cake, doughnut, chocolate, chewing gum, toffee and candy; frozen-desserts, such as ice-cream and sherbet; preserved fruits; syrups; pastes, such as flour paste, peanut paste and fruit paste; preserved foods, such as jam, marmalade, and those of fruit and vegetable; pickles and pickled products; meat products, such as ham and sausage; fish-meat products, such as ham and sausage; daily dishes, such as potato salad; bottled and canned foods, such as those of fish-meat, meat, fruit and vegetable; soft drinks, such as coffee, cocoa, juice, carbonated drinks, sour milk beverage, and yogurt drinks; liquors, such as brandy, whisky and wine; and convenient foods, such as those of pudding, hot cake, juice and coffee.

Detailed Description Text (14):

After dissolving 100 g of trisodium glycyrrhizinate, purchased from Tokyo Kasei Kogyo Company, Limited, Tokyo, Japan, and 500 g of .beta.-cyclodextrin in 5 liters of water while heating, the solution was cooled to 60.degree. C., followed by pH-adjustment to 5.5.

Detailed Description Text (24):

Although in this EXAMPLE, complete removal of the incorporated colored impurities was quite difficult, the sweetener is much more favorably usable for sweetening certain food products, wherein a slight colored substance is negligible, in comparison with any conventional sweetener containing glycyrrhizin. For example, the use of the sweetener enables low-cost production of various food products, e.g., seasonings, such as soy sauce, sauce, soy paste, mayonnaise, and extract for soup; pickles and pickled products; confectioneries, such as chocolate, cocoa, chewing gum, pudding and candy; preserved foods; and sour milk beverage.

Detailed Description Text (44):Chewing gumDetailed Description Text (46):

The product is a low-cariogenic, low-caloric chewing gum with excellent chewing properties and appropriate sweetness.

WEST

*Fig. II**see claim 10*

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*glycyrrhizic acid chewing gum*

L10: Entry 10 of 55

File: USPT

Feb 2, 1999

US-PAT-NO: 5866179

DOCUMENT-IDENTIFIER: US 5866179 A

TITLE: Medicated chewing gum and a process for preparation thereof

DATE-ISSUED: February 2, 1999

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Testa, Emilio Stefano	Chiasso-Vacallo			CH

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Avant-Garde Technologies & Products S.A.	Chiasso-Vacallo			CH	03

APPL-NO: 08/ 646744 [PALM]

DATE FILED: May 3, 1996

INT-CL: [06] A23 G 3/30

US-CL-ISSUED: 426/3; 426/531, 424/440, 424/441, 424/464, 424/195.1, 514/343, 514/836

US-CL-CURRENT: 426/3; 424/195.18, 424/440, 424/441, 424/464, 424/728, 424/752, 426/531, 514/343, 514/836

FIELD-OF-SEARCH: 424/441, 424/195.1, 424/440, 424/464, 424/484, 426/3, 426/531, 514/343, 514/836

PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

Search Selected

Search ALL

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	<u>3262784</u>	July 1966	Bucher	
<input type="checkbox"/>	<u>4068004</u>	January 1978	Carlin et al.	
<input type="checkbox"/>	<u>4161546</u>	July 1979	Akin et al.	
<input type="checkbox"/>	<u>4348416</u>	September 1982	Boden	
<input type="checkbox"/>	<u>4849225</u>	July 1989	Mitsubishi et al.	
<input type="checkbox"/>	<u>4882176</u>	November 1989	Koyama et al.	
<input type="checkbox"/>	<u>5165943</u>	November 1992	Patel et al.	
<input type="checkbox"/>	<u>5229148</u>	July 1993	Copper	
<input type="checkbox"/>	<u>5314877</u>	May 1994	Suzuki et al.	
<input type="checkbox"/>	<u>5344659</u>	September 1994	Kurihara et al.	
<input type="checkbox"/>	<u>5362496</u>	November 1994	Baker et al.	
<input type="checkbox"/>	<u>5370881</u>	December 1994	Fuisz	

## FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
0 151 344 A2	August 1985	EP	
0 575 977 A2	December 1993	EP	

ART-UNIT: 165

PRIMARY-EXAMINER: Bawa; Raj

## ABSTRACT:

The present invention relates to a medicated chewing gum comprising a pharmaceutically active agent incorporated therein. The medicated gum is used as a means for administering the active agent to a subject. The invention also relates to a method of preparing the medicated chewing gum. The process involves the formation of a cyclodextrin-active agent inclusion complex, which is dried and mixed with a granulated gum base without adding water or other solvents. The process is carried out under controlled temperature and humidity and the blended components are cold-pressed to produce a final gum product.

44 Claims, 0 Drawing figures



In view of the deficiencies of the prior methods of producing medicated chewing gum containing active agents, the present process was developed to overcome these various shortcomings and provide a novel process for producing medicated chewing gum containing inclusion complexes of cyclodextrin-enclosed active agents.

**Brief Summary Text (18):**

The present invention relates to a process for the preparation of medicated chewing gum containing inclusion complexes of cyclodextrin-enclosed active agent in which the components are dry-mixed under controlled temperature and humidity and the resulting gum blend is cold-pressed under similar controlled temperature and humidity. As used herein "medicated" chewing gum means chewing gum containing one or more of the following active agents: a physiologically active ingredient, nutritional supplement or pharmaceutically active ingredient. Non-limiting examples of active agents are given below.

**Brief Summary Text (21):**

Active agents suitable for use in the medicated chewing gum disclosed herein include, but are not limited to vitamins, and particularly I-ascorbic acid (Vitamin C); analgesics, and particularly acetaminophen (APAP) and ibuprofen; antihistamines; and particularly dimenhydrinate; antibacterial agents, and particularly chlorhexidine diacetate; chelated minerals, and particularly chromopol picolinate; tonic agents, and particularly ginseng; circulatory agents, and particularly ginkgo biloba extracts; oral deodorants, and particularly tea and vegetable extracts; and nicotine.

**Brief Summary Text (24):**

The process for the preparation of the medicated chewing gum is described below in its general embodiment by way of example. However, it is possible to effect numerous alternative variations, as will be clear to one of ordinary skill in the art.

**Brief Summary Text (29):**

One or more well known chewing gum excipients can be added to the gum base, before or after combining it with the inclusion complex. These excipients include, but are not limited to, sweeteners, flavoring agents, and compression adjuvants.

**Brief Summary Text (30):**

Sweeteners are generally carbohydrates, particularly sucrose and glucose. If non-cavity generating products are desired, mannitol, sorbitol, glycine and other non-cavity generating excipients may be used. For such non-cavity generating products, sweeteners such as aspartame, cyclohexyl sulfamate, saccharine, acesulfame k, stevioside, and ammonium glycyrrhizinate may be used.

**Brief Summary Text (35):**

The final mixture is then transferred to a suitable tableting machine for production of the final chewing gum product. The tableting machine is also kept at temperatures below 20.degree. C. and preferably below 18.degree. C., and the relative ambient humidity is maintained below 50% but typically at 40% or above (always below 50%). By way of example, an 18 punch machine, such as the Ronchi RD18, (Fratelli RONCHI S.p.A., Cinsello Balsamo, Italy) can produce 50,000 units/hour by the above-described method.

**CLAIMS:**

1. A process for the preparation of medicated chewing gum comprising

(d) cold-pressing the mixture of step (c) under a temperature of below 20.degree. C. and a maximum relative humidity of 50% to produce a tablet of medicated chewing gum.

10. The process of claim 8, wherein the sweeteners include at least one of aspartame, cyclohexyl sulfamate, saccharin, acesulfame-k, glycyrrhizinate and stevioside.

23. A medicated chewing gum tablet produced in accordance with the process of claim 1.

24. A medicated chewing gum tablet produced in accordance with the process of claim 2.

25. A medicated chewing gum tablet produced in accordance with the process of claim 4.

26. A medicated chewing gum tablet produced in accordance with the process of claim 5.

27. A medicated chewing gum tablet produced in accordance with the process of claim 6.

28. A medicated chewing gum tablet produced in accordance with the process of claim 7.

29. A medicated chewing gum tablet produced in accordance with the process of claim 8.

30. A medicated chewing gum tablet produced in accordance with the process of claim 9.

**WEST**

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L1: Entry 29 of 85

File: USPT

US-PAT-NO: 5260053

DOCUMENT-IDENTIFIER: US 5260053 A

TITLE: Herbal deodorant

DATE-ISSUED: November 9, 1993

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Chappell; Katherine C.	Kennebunk	ME		
Scheeler; Pamela A.	Portsmouth	NH		
Rittershaus; Gary	Kennebunkport	ME		

US-CL-CURRENT: 424/65; 424/195.15, 424/195.17, 424/756

## CLAIMS:

What is claimed is:

1. A deodorant composition with active antibacterial constituents consisting essentially of (by weight based upon total weight of the composition):

a. about 1% to 6% Lichen Extract;

b. about 0.1% to 3% Coriander Oil; and

c. about 0.1% to 0.6% Glyceryl Monolaurate, said composition being essentially free of petroleum derived constituents and alcohols.

2. A liquid roll-on deodorant composition consisting essentially of (by weight) based upon total weight of the composition:

a. about 40 to 70% Glycerin;

b. about 10% to 50% Chamomile Tea;

c. about 5% to 25% Witch Hazel;

d. about 5% to 20% Aloe Vera;

e. about 1% to 6% Lichen Extract;

f. about 0.1% to 3% Oat Flour;

g. about 0.1% to 3% Coriander Oil; and

h. about 0.1% to 3% Xanthan Gum.

3. The liquid roll-on deodorant composition of claim 2 containing Glycerin in the range of about 47% to 52%, by weight based upon total weight of the composition.

4. The liquid roll-on deodorant composition of claim 3 containing about 50% by weight (based upon total weight of the composition) Glycerin.

5. The liquid roll-on deodorant composition of claim 2 containing chamomile Tea in the range of about 18.80% to 22.80%, by weight based upon total weight of the composition.

6. The liquid roll-on deodorant composition of claim 5 containing about 20.80% by weight (based upon total weight of the composition).

7. The liquid roll-on deodorant composition of claim 2 containing Witch Hazel in the range of about 16.0% to 20.0%, by weight based upon total weight of the composition.

8. The liquid roll-on deodorant composition of claim 7 containing about 18.00% by weight (based upon total weight of the composition) Witch Hazel.

9. The liquid roll-on deodorant composition of claim 2 containing Aloe Vera in the range of about 8.0% to 12.0%, by weight based upon total weight of the composition.

10. The liquid roll-on deodorant composition of claim 9 containing about 10% by weight (based upon total weight of the composition) Aloe Vera.

11. The liquid roll-on deodorant composition of claim 2 containing Lichen Extract in the range of about 1.8% to 2.2%, by weight based upon total weight of the composition.

12. The liquid roll-on deodorant composition of claim 11 containing about 2.0% by weight (based upon total weight of the composition) Lichen Extract.

13. The liquid roll-on deodorant composition of claim 2 containing Oat Flour in the range of about 0.45% to 0.55%, by weight based upon total weight of the composition.

14. The liquid roll-on deodorant composition of claim 13 containing about 0.5% by weight (based upon total weight of the composition) Oat Flour.

15. The liquid roll-on deodorant composition of claim 2 containing Coriander Oil in the range of about 0.35% to 0.45%, by weight based upon total weight of the composition.

16. The liquid roll-on deodorant composition of claim 15 containing about 0.40% by weight (based upon total weight of the composition) Coriander Oil.

17. The liquid roll-on deodorant composition of claim 2 containing Xanthan Gum in the range of about 0.25% to 0.35%, by weight (based upon total weight of the composition).

18. The liquid roll-on deodorant composition of claim 17 containing about 0.30% by weight (based upon total weight of the composition) Xanthan Gum.

19. A deodorant composition consisting essentially of (by weight based upon total weight of the composition):

- a. about 40 to 70% Glycerin;
- b. about 20% to 60% Chamomile Tea;
- c. about 3% to 8% Sodium Stearate;
- d. about 5% to 15% Witch Hazel;
- e. about 5% to 15% Aloe Vera;
- f. about 1% to 6% Lichen Extract;
- g. about 0.1% to 3% Oat Flour;
- h. about 0.1% to 3% Coriander Oil; and
- i. about 0.1% to 0.% Glyceryl Monolaurate.

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L1: Entry 29 of 85

File: USPT

DOCUMENT-IDENTIFIER: US 5260053 A

TITLE: Herbal deodorant

**Brief Summary Text (8):**

The use of natural bactericides is known in the art. For example, Kabara U.S. Pat. No. 4,002,775 and Hoppe et al. U.S. Pat. No. 4,921,694 describe lauroyl monoesters of glycerin and synergistic mixtures having antibacterial activity. Also, EP Patent Publication No. 376761, German Patent Nos. 23 54 517, 23 51 927 and 23 51 864 and United Kingdom Patent Publication No. 1,475,226 describe the deodorizing effects of lichen acid, and especially usnic acid.

**Detailed Description Text (6):**

In the preferred composition, lichen extract also acts to reduce micrococci and diphtheroids. The active component in lichen extract is usnic acid. Usnic acid and its metal salt, sodium usnate, are potent, gram positive specific antibacterial compounds. The typical usnate content found in lichen extract is around 5.0%. A one percent level of lichen extract represents only 0.05% sodium usnate. Part for part, sodium usnate is as powerful as triclosan. Usnic acid is a dibenzofuran derivative and, in the metal salt form, it is readily soluble in water. It inhibits mitosis and cell respiration and easily permeates the cell wall of most gram positive bacteria. Sodium usnate has a typical minimum inhibitory count (MIC) of 0.002% and a minimal germicidal concentration (MGC) of 0.1%. The lichen extract would then have an MIC of 0.04 and an MGC of 2.0%. The zone of inhibition for lichen extract is about 40 mm.

**Detailed Description Text (7):**

In formulations suitable for application as a liquid roll-on deodorant, due to the pH of the composition and the acidic nature of the axillary vault, the application of the roll-on formulation distributes a dispersion of usnic acid on the skin's surface which then acts as a bactericide in the axillary vault. While the metal salt form of usnic acid is water soluble, the free form of usnic acid is not water soluble and will cling to the skin surface despite the presence of eccrine sweat.

**Detailed Description Text (8):**

In formulations suitable for applications as a stick deodorant, an emollient glycerol monolaurate is typically provided, in addition to coriander oil and lichen extract, due to the relatively high solubility of the metal salt form of usnic acid in water. The glycerol monolaurate serves to hold the usnic acid to the skin.

**WEST**

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L1: Entry 29 of 85

File: USPT

Nov 9, 1993

US-PAT-NO: 5260053

DOCUMENT-IDENTIFIER: US 5260053 A

TITLE: Herbal deodorant

DATE-ISSUED: November 9, 1993

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Chappell; Katherine C.	Kennebunk	ME		
Scheeler; Pamela A.	Portsmouth	NH		
Rittershaus; Gary	Kennebunkport	ME		

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Tom's of Maine	Kennebunk	ME			02

DISCLAIMER DATE: 20101026

APPL-NO: 07/ 866199 [PALM]

DATE FILED: April 9, 1992

## PARENT-CASE:

RELATED APPLICATIONS This application is a continuation in part of U.S. Ser. No. 07/814,569, filed Dec. 30, 1991.

INT-CL: [05] A61K 7/32, A61K 35/82

US-CL-ISSUED: 424/65; 424/195.1

US-CL-CURRENT: 424/65; 424/195.15, 424/195.17, 424/756

FIELD-OF-SEARCH: 424/65, 424/401, 424/195.1

## PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

Search Selected

Search ALL

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	<u>4002775</u>	January 1977	Kabara	426/532
<input type="checkbox"/>	<u>4014995</u>	March 1977	Juliano	424/71
<input type="checkbox"/>	<u>4883651</u>	November 1989	Meyer	424/47
<input type="checkbox"/>	<u>4921694</u>	May 1990	Hoppe	424/65
<input type="checkbox"/>	<u>4933177</u>	June 1990	Grollier	424/70
<input type="checkbox"/>	<u>5137717</u>	August 1992	Wixforth	424/78.07

## FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
1475226	June 1977	GB	
1590485	June 1981	GB	
1596791	August 1981	GB	
0077047A1	April 1983	WO	
0433911A1	June 1991	WO	

## OTHER PUBLICATIONS

Webster's 9th New Collegiate Dictionary pp. 73, 290.

ART-UNIT: 152

PRIMARY-EXAMINER: Page; Thurman K.

ASSISTANT-EXAMINER: Gardner; Sally

## ABSTRACT:

A deodorant composition for use in a liquid roll-on or stick deodorant has active antibacterial constituents consisting essentially of natural materials and is essentially free of petroleum derived constituents and alcohols. In a preferred embodiment of the composition for use as a liquid roll-on deodorant, the active antibacterial constituents consist essentially of about 1% to 6% (by weight) Lichen Extract and about 0.1% to 3% (by weight) Coriander Oil.

19 Claims, 0 Drawing figures

**WEST**☐  

L1: Entry 30 of 85

File: USPT

US-PAT-NO: 5256405

DOCUMENT-IDENTIFIER: US 5256405 A

TITLE: Herbal deodorant

DATE-ISSUED: October 26, 1993

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Chappell; Katherine C.	Kennebunk	ME		
Scheeler; Pamela A.	Portsmouth	NH		
Rittershaus; Gary	Kennebunkport	ME		

US-CL-CURRENT: 424/65; 424/195.15, 424/195.17, 424/756, 424/DIG.5

## CLAIMS:

What is claimed is:

1. A stick deodorant composition with active antibacterial constituents consisting essentially of (by weight based upon total weight of the composition):

- a. about 1% to 6% Lichen Extract;
- b. about 0.1% to 3% Coriander Oil; and
- c. about 0.1% to 0.6% Glyceryl Monolaurate,

said composition being essentially free of petroleum derived constituents and alcohols.

2. The stick deodorant composition of claim 1 containing Lichen Extract in the range of about 1.8% to 2.2%, by weight based upon total weight of the composition.

3. The stick deodorant composition of claim 2 containing about 2.0% by weight (based upon total weight of the composition) Lichen Extract.

4. The stick deodorant composition of claim 1 containing Coriander Oil in the range of about 0.38% to 0.42%, by weight based upon



total weight of the composition.

5. The stick deodorant composition of claim 4 containing about 0.4% by weight (based upon total weight of the composition) Coriander Oil.

6. The stick deodorant composition of claim 1 containing Glyceryl Monolaurate in the range of about 0.38% to 0.42% by weight based upon total weight of the composition.

7. The stick deodorant composition of claim 6 containing about 0.40% by weight (based upon total weight of the composition) Glyceryl Monolaurate.

8. A stick deodorant composition consisting essentially of (by weight based upon total weight of the composition):

- a. about 40% to 70% Glycerin;
- b. about 20% to 60% Chamomile Tea
- c. about 3% to 8% Sodium Stearate;
- d. about 5% to 15% Witch Hazel;
- e. about 5% to 15% Aloe Vera;
- f. about 1% to 6% Lichen Extract;
- g. about 0.1% to 3% Oat Flour;
- h. about 0.1% to 3% Coriander Oil; and
- i. about 0.1% to 0.6% Glyceryl Monolaurate.

9. The stick deodorant composition of claim 8 containing Glycerin in the range of about 47% to 52%, by weight based upon total weight of the composition.

10. The stick deodorant composition of claim 9 containing about 50% by weight (based upon total weight of the composition) Glycerin.

11. The stick deodorant composition of claim 8 containing Chamomile Tea in the range of about 32% to 36%, by weight based upon total weight of the composition.

12. The stick deodorant composition of claim 11 containing about 34% by weight (based upon total weight of the composition) Chamomile Tea.

13. The stick deodorant composition of claim 8 containing Sodium Stearate in the range of about 4.75% to 5.25%, by weight based upon total weight of the composition.

14. The stick deodorant composition of claim 13 containing about 5.0% by weight (based upon total weight of the composition) Sodium Stearate.

15. The stick deodorant composition of claim 8 containing Witch Hazel in the range of about 3.3% to 3.7%, by weight based upon total weight of the composition.

16. The stick deodorant composition of claim 15 containing about 3.5% by weight (based upon total weight of the composition ) Witch Hazel.

17. The stick deodorant composition of claim 8 containing Aloe Vera in the range of about 3.3% to 3.7%, by weight based upon total weight of the composition.

18. The stick deodorant composition of claim 17 containing about 3.5% by weight (based upon total weight of the composition) Aloe Vera.

19. The stick deodorant composition of claim 8 containing Lichen Extract in the range of about 1.8% to 2.2%, by weight based upon total weight of the composition.

20. The stick deodorant composition of claim 19 containing about 2.0% by weight (based upon total weight of the composition) Lichen Extract.

21. The stick deodorant composition of claim 8 containing Oat Flour in the range of about 1.2% to 1.3%, by weight based upon total weight of the composition.

22. The stick deodorant composition of claim 21 containing about 1.25% by weight (based upon total weight of the composition) Oat Flour.

23. The stick deodorant composition of claim 8 containing Coriander Oil in the range of about 0.38% to 0.42%, by weight based upon

total weight of the composition.

24. The stick deodorant composition of claim 23 containing about 0.40% by weight (based upon total weight of the composition) Coriander Oil.

25. The stick deodorant composition of claim 8 containing Glyceryl Monolaurate in the range of about 0.38% to 0.42%, by weight based upon total weight of the composition.

26. The stick deodorant composition of claim 25 containing about 0.40% by weight (based upon total weight of the composition) Glyceryl Monolaurate.

**WEST**

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L1: Entry 30 of 85

File: USPT

DOCUMENT-IDENTIFIER: US 5256405 A

TITLE: Herbal deodorant

Brief Summary Text (8):

The use of natural bactericides is known in the art. For example, Kabara U.S. Pat. No. 4,002,775 and Ulrich et al. U.S. Pat. No. 4,921,694 describe lauroyl monoesters of glycerin and synergistic mixtures having antibacterial activity. Also, EP Patent Publication No. 376761, German Patent Nos. 23 54 517, 23 51 927 and 23 51 864 and United Kingdom Patent Publication No. 1,475,226 describe the deodorizing effects of lichen acid, and especially usnic acid.

Detailed Description Text (8):

Lichen extract also acts to reduce micrococci and diphtheroids. The active component in lichen extract is usnic acid. Usnic acid and its metal salt, sodium usnate, are potent, gram positive specific antibacterial compounds. The typical usnate content found in lichen extract is around 5.0%. A one percent level of lichen extract represents only 0.05% sodium usnate. Part for part, sodium usnate is as powerful as triclosan. Usnic acid is a dibenzofuran derivative and, in the metal salt form, it is readily soluble in water. It inhibits mitosis and cell respiration and easily permeates the cell wall of most gram positive bacteria. Due to its relatively high solubility in water, an emollient is typically provided to hold it on the skin. Sodium usnate has a typical minimum inhibitory count (MIC) of 0.002% and a minimal germicidal concentration (MGC) of 0.1%. The lichen extract would then have an MIC of 0.04 and an MGC of 2.0%. The zone of inhibition for lichen extract is about 40 mm. Lichen extract is present in the formulation in a range of about 1.0 to 6.0 percent by weight, and preferably in a range of about 1.8 to 2.2 percent by weight.

**WEST**☐  

L1: Entry 30 of 85

File: USPT

Oct 26, 1993

US-PAT-NO: 5256405

DOCUMENT-IDENTIFIER: US 5256405 A

TITLE: Herbal deodorant

DATE-ISSUED: October 26, 1993

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Chappell; Katherine C.	Kennebunk	ME		
Scheeler; Pamela A.	Portsmouth	NH		
Rittershaus; Gary	Kennebunkport	ME		

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Tom's of Maine	Kennebunk	ME			02

APPL-NO: 07/ 814569 [PALM]

DATE FILED: December 30, 1991

INT-CL: [05] A61K 7/32, A61K 35/82

US-CL-ISSUED: 424/65; 424/195.1, 424/DIG.5

US-CL-CURRENT: 424/65; 424/195.15, 424/195.17, 424/756, 424/DIG.5

FIELD-OF-SEARCH: 424/65, 424/401, 424/195.1, 424/DIG.5

## PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<input type="checkbox"/>	<u>4002775</u>	January 1977	Kabara	424/312
<input type="checkbox"/>	<u>4014995</u>	March 1977	Juliano	424/71
<input type="checkbox"/>	<u>4067977</u>	January 1978	Hoover et al.	424/246
<input type="checkbox"/>	<u>4067997</u>	January 1978	Kabara	424/49
<input type="checkbox"/>	<u>4759924</u>	July 1988	Luebbe et al.	424/65
<input type="checkbox"/>	<u>4883651</u>	November 1989	Meyer	424/47
<input type="checkbox"/>	<u>4921694</u>	May 1990	Hoppe	424/47
<input type="checkbox"/>	<u>4933177</u>	June 1990	Grollier	424/70
<input type="checkbox"/>	<u>5137717</u>	August 1992	Wixforth	424/78.07

## FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
0376761	July 1990	EP	
2351864	October 1973	DE	
2351927	October 1973	DE	
2354517	October 1973	DE	
1475226	June 1977	GB	
1590485	June 1981	GB	
1596791	August 1981	GB	
0077047A1	April 1983	WO	
0433911A1	June 1991	WO	

## OTHER PUBLICATIONS

Cosmetochem Product Information article, Deo-Usnate, Dr. Marina Fontana, Apr. 1974.  
Cosmetic and Drug Preservation, Principles and Practice, edited by Jon J. Kabara, 1984.

ART-UNIT: 152

PRIMARY-EXAMINER: Page; Thurman K.

ASSISTANT-EXAMINER: Gardner; Sally

## ABSTRACT:

A stick deodorant composition that has active antibacterial constituents consisting essentially of natural materials, and that is essentially free of petroleum derived constituents and alcohols. In the preferred embodiment, the active antibacterial constituents consist essentially of about 1% to 6% (by weight) Lichen Extract, about 0.1% to 3% Coriander Oil; and about 0.1% to 0.6% Glyceryl Monolaurate.

26 Claims, 0 Drawing figures

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L1: Entry 41 of 85

File: JPAB

Oct 4, 1994

PUB-NO: JP406279208A

DOCUMENT-IDENTIFIER: JP 06279208 A

TITLE: ANTISEPTIC AGENT SYSTEM

PUBN-DATE: October 4, 1994

INVENTOR-INFORMATION:

NAME

COUNTRY

MCGEE, THOMAS

INT-CL (IPC): A01N 37/02; A01N 25/30; A01N 37/06; A01N 37/10

ABSTRACT:

PURPOSE: To provide an antiseptic agent system which is added to final products, such as washing products for housework, body washing products, textile protective products and personal care products, and prevents the putrefaction by the microorganisms of these products.

CONSTITUTION: The antiseptic agent system contains &ge;1 kinds of org. acids selected from the group consisting of benzoic acid, sorbic acid, propionic acid, undecenoic acid, salicylic acid, formic acid, usnic acid and/or their esters and/or salts and antimicrobial perfumes or perfume components and the above components exhibit potentiation.

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L1: Entry 41 of 85

File: JPAB

Oct 4, 1994

PUB-NO: JP406279208A  
DOCUMENT-IDENTIFIER: JP 06279208 A  
TITLE: ANTISEPTIC AGENT SYSTEM

PUBN-DATE: October 4, 1994

## INVENTOR-INFORMATION:

NAME

COUNTRY

MCGEE, THOMAS

## ASSIGNEE-INFORMATION:

NAME

COUNTRY

GIVAUDAN ROURE INTERNATL SA

APPL-NO: JP05115039

APPL-DATE: May 17, 1993

INT-CL (IPC): A01N 37/02; A01N 25/30; A01N 37/06; A01N 37/10

## ABSTRACT:

PURPOSE: To provide an antiseptic agent system which is added to final products, such as washing products for housework, body washing products, textile protective products and personal care products, and prevents the putrefaction by the microorganisms of these products.

CONSTITUTION: The antiseptic agent system contains &ge;1 kinds of org. acids selected from the group consisting of benzoic acid, sorbic acid, propionic acid, undecenoic acid, salicylic acid, formic acid, usnic acid and/or their esters and/or salts and antimicrobial perfumes or perfume components and the above components exhibit potentiation.

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L1: Entry 42 of 85

File: JPAB

Sep 24, 1993

DOCUMENT-IDENTIFIER: JP 05246822 A

TITLE: ANTIBACTERIAL AGENT

Abstract (2):

CONSTITUTION: An antibacterial agent against *Propionibacterium acnes*, containing usnic acids such as usnic acid, isousnic acid, didymic acid, placodiolic acid, pannaric acid, schizopeltic acid, strepsilin and polyphyllic acid or lichesterinic acids such as lichesterinic acid, protolichesterinic acid, nephrosterinic acid, acarenoic acid, acaranoic acid, nephrosteranic acid, nephromopsic acid and roccellaric acid as an active ingredient. Generally the antibacterial agent is directly applied to the affected part by external method and may be orally administered. A dose is varied depending upon the area of the affected part, etc., and, for example, a dose containing 0.001-10% active ingredient is thinly applied to the affected part several times daily.

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L1: Entry 42 of 85

File: JPAB

Sep 24, 1993

PUB-NO: JP405246822A  
DOCUMENT-IDENTIFIER: JP 05246822 A  
TITLE: ANTIBACTERIAL AGENT

PUBN-DATE: September 24, 1993

## INVENTOR-INFORMATION:

NAME	COUNTRY
HIGUCHI, MASAKO	
MIURA, YASUTAKA	
KINOSHITA, YASUHIRO	
YAMAMOTO, YOSHIKAZU	
MAYAMA, SHIGEYUKI	

## ASSIGNEE-INFORMATION:

NAME	COUNTRY
NIPPON PAINT CO LTD	

APPL-NO: JP04084686

APPL-DATE: March 7, 1992

INT-CL (IPC): A61K 7/00; A61K 7/00; A61K 31/20; A61K 31/34; C07D 307/91

## ABSTRACT:

PURPOSE: To obtain an antibacterial agent usable as cosmetic or medicine for preventing and treating microbism (pimple) with Propionibacterium acnes, having excellent stability.

CONSTITUTION: An antibacterial agent against Propionibacterium acnes, containing usnic acids such as usnic acid, isousnic acid, didymic acid, placodiolic acid, pannaric acid, schizopeltic acid, strepsilin and polyphyllic acid or lichesterinic acids such as lichesterinic acid, protolichesterinic acid, nephrosterinic acid, acarenoic acid, acaranoic acid, nephrosteranic acid, nephromopsic acid and roccellaric acid as an active ingredient. Generally the antibacterial agent is directly applied to the affected part by external method and may be orally administered. A dose is varied depending upon the area of the affected part, etc., and, for example, a dose containing 0.001-10% active ingredient is thinly applied to the affected part several times daily.

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L1: Entry 53 of 85

File: EPAB

Oct 27, 1982

DOCUMENT-IDENTIFIER: GB 2096996 A

TITLE: A process for the isolation of (+)-usnic acid from usnea barbata LAbstract (1):

CHG DATE=19990617 STATUS=O> A process for the direct and simple isolation of (+)-usnic acid, which due to its biocide activity is useful in pharmacy and cosmetics, from Usnea barbata L. by means of extraction with ethanol as extraction solvent, followed by filtration under pressure or in vacuo, is disclosed.

**WEST**

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L1: Entry 53 of 85

File: EPAB

Oct 27, 1982

PUB-NO: GB002096996A

DOCUMENT-IDENTIFIER: GB 2096996 A

TITLE: A process for the isolation of (+)-usnic acid from usnea barbata L

PUBN-DATE: October 27, 1982

ASSIGNEE-INFORMATION:

NAME

COUNTRY

FARM &amp; HEMI PROIZV FAB

APPL-NO: GB08209821

APPL-DATE: April 2, 1982

PRIORITY-DATA: YU00091981A (April 8, 1981)

US-CL-CURRENT: 549/461

INT-CL (IPC): C07D 307/91

EUR-CL (EPC): A61K035/82; C07D307/91

ABSTRACT:

CHG DATE=19990617 STATUS=O> A process for the direct and simple isolation of (+)-usnic acid, which due to its biocide activity is useful in pharmacy and cosmetics, from Usnea barbata L. by means of extraction with ethanol as extraction solvent, followed by filtration under pressure or in vacuo, is disclosed.

**WEST**

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L4: Entry 2 of 4

File: USPT

DOCUMENT-IDENTIFIER: US 5260053 A

TITLE: Herbal deodorant

Abstract Text (1):

A deodorant composition for use in a liquid roll-on or stick deodorant has active antibacterial constituents consisting essentially of natural materials and is essentially free of petroleum derived constituents and alcohols. In a preferred embodiment of the composition for use as a liquid roll-on deodorant, the active antibacterial constituents consist essentially of about 1% to 6% (by weight) Lichen Extract and about 0.1% to 3% (by weight) Coriander Oil.

Brief Summary Text (8):

The use of natural bactericides is known in the art. For example, Kabara U.S. Pat. No. 4,002,775 and Hoppe et al. U.S. Pat. No. 4,921,694 describe lauroyl monoesters of glycerin and synergistic mixtures having antibacterial activity. Also, EP Patent Publication No. 376761, German Patent Nos. 23 54 517, 23 51 927 and 23 51 864 and United Kingdom Patent Publication No. 1,475,226 describe the deodorizing effects of lichen acid, and especially usnic acid.

Brief Summary Text (11):

According to one aspect of the invention, in preferred embodiments, the deodorant composition for a liquid roll-on deodorant consists essentially of the following ingredients, with the preferred ranges given by weight percent: (a) Glycerin, about 40% to 70%, preferably about 47 to 52%, and more preferably about 50%; (b) Chamomile Tea, about 10% to 50%, preferably about 18.8% to 22.8%, and more preferably about 20.8%; (c) Witch Hazel, about 5% to 25%, preferably about 16% to 20%, and more preferably about 18%; (d) Aloe Vera, about 5% to 20%, preferably about 8.0% to 12.0%, and more preferably about 10.0%; (e) Lichen Extract, about 1% to 6%, preferably about 1.8% to 2.2%, and more preferably about 2.0%; (f) Oat Flour, about 0.1% to 3%, preferably about 0.45% to 0.55%, and more preferably about 0.5%; (g) Coriander Oil, about 0.1 % to 3%, preferably about 0.35% to 0.45%, and more preferably about 0.40%; and (h) Xanthan Gum, about 0.1% to 3.0%, preferably about 0.25% to 0.35%, and more preferably about 0.30%.

Brief Summary Text (12):

According to another aspect of the invention, in preferred embodiments, a deodorant composition for a stick deodorant consists essentially of the following ingredients, with the preferred ranges given by weight percent: (a) Glycerin, about 40% to 70%, preferably about 47% to 52%, and more preferably about 50%; (b) Chamomile Tea, about 20% to 60%, preferably about 32% to 36%, and more preferably about 34%; (c) Sodium Stearate, about 3% to 8%, preferably about 4.75% to 5.25%, and more preferably about 5.0%; (d) Witch Hazel, about 5% to 15%, preferably about 3.3% to 3.7%, and more preferably about 3.5%; (e) Aloe Vera, about 5% to 15%, preferably about 3.3% to 3.7%, and more preferably about 3.5%; (f) Lichen Extract, about 1% to 6%, preferably about 1.8% to 2.2%, and more preferably about 2.0%; (g) Oat Flour, about 0.1% to 3%, preferably about 1.2% to 1.3%, and more preferably about 1.25%; (h) Coriander Oil, about 0.1% to 3%, preferably about 0.38% to 0.42%, and more preferably about 0.40%; and (i) Glyceryl Monolaurate, about 0.1% to 0.6%, preferably about 0.38% to 0.42%, and more preferably about 0.40%.

Brief Summary Text (14):

In preferred embodiments of this aspect of the invention, the deodorant composition for liquid roll-on and stick deodorants consists essentially of the following ingredients, with the preferred ranges given by weight percent: (a) Lichen Extract, about 1% to 6%, preferably about 1.8% to 2.2%, and more preferably about 2.0%; and (b) Coriander Oil, about 0.1% to 3%, preferably about 0.38 to 0.42%, and more preferably about 0.40%. In addition, the stick deodorant composition contains (c) Glyceryl Monolaurate, about 0.1% to 0.6%, preferably about 0.38 to 0.42%, and more preferably about 0.40%. The primary inactive constituent consists of glycerin. The composition is essentially free of petroleum derived constituents and alcohols.

Detailed Description Text (2):

The invention is a deodorant composition which contains natural antibacterial ingredients (e.g., lichen extract and coriander oil), and no petroleum derived ingredients or alcohol, to provide gentle protection with minimal cause for skin irritation. The composition is adaptable for use in a liquid roll-on deodorant, and for use in a stick deodorant.

Detailed Description Text (4):

Deodorant compositions of the invention suitable for stick or liquid roll-on applications contain natural active constituents including coriander oil and lichen extract. These natural active constituents interact to accomplish odor prevention. The understanding of the role that each constituent plays based on in vivo, in vitro observations and theoretical considerations.

Detailed Description Text (6):

In the preferred composition, lichen extract also acts to reduce micrococci and diphtheroids. The active component in lichen extract is usnic acid. Usnic acid and its metal salt, sodium usnate, are potent, gram positive specific antibacterial compounds. The typical usnate content found in lichen extract is around 5.0%. A one percent level of lichen extract represents only 0.05% sodium usnate. Part for part, sodium usnate is as powerful as triclosan. Usnic acid is a dibenzofuran derivative and, in the metal salt form, it is readily soluble in water. It inhibits mitosis and cell respiration and easily permeates the cell wall of most gram positive bacteria. Sodium usnate has a typical minimum inhibitory count (MIC) of 0.002% and a minimal germicidal concentration (MGC) of 0.1%. The lichen extract would then have an MIC of 0.04 and an MGC of 2.0%. The zone of inhibition for lichen extract is about 40 mm.

Detailed Description Text (7):

In formulations suitable for application as a liquid roll-on deodorant, due to the pH of the composition and the acidic nature of the axillary vault, the application of the roll-on formulation distributes a dispersion of usnic acid on the skin's surface which then acts as a bactericide in the axillary vault. While the metal salt form of usnic acid is water soluble, the free form of usnic acid is not water soluble and will cling to the skin surface despite the presence of eccrine sweat.

Detailed Description Text (8):

In formulations suitable for applications as a stick deodorant, an emollient glycerol monolaurate is typically provided, in addition to coriander oil and lichen extract, due to the relatively high solubility of the metal salt form of usnic acid in water. The glycerol monolaurate serves to hold the usnic acid to the skin.

Detailed Description Text (9):

Glyceryl monolaurate is a tranester of glycerin and the lauric acid from coconut oil. It is a gram positive specific agent and has a minimum inhibitory concentration of 0.1%, with a zone of inhibition of about 15 mm. Glyceryl monolaurate acts as an emollient, oil emulsifier, and possesses the aforementioned antibacterial qualities. It helps to enhance the efficacy of coriander by making it more water soluble, and also serves to hold the lichen extract on the skin. The antibacterial action is only a consideration when the pH of the emollient reaches the range of from 6.0 to 7.0 in the axillary vault. The pH of the stick deodorant composition is in the range from 9.0 to 10.0 and activity would not be observed until normal skin pH is restored. The composition relies more specifically on its surfactant qualities and dry feel than antibacterial potential.

Detailed Description Text (10):

In formulations of the invention for use as a liquid roll-on deodorant, the proportions of active ingredients are typically as follows: lichen extract present in a range of about 1% to 6% by weight, and preferably in a range of about 1.8% to 2.2% by weight; and coriander oil present in a range of about 0.1% to 3% by weight, and preferably in a range of about 0.35% to 0.45% by weight.

Detailed Description Text (11):

In formulations of the invention for use as a stick deodorant, the proportions of active ingredients are typically as follows: lichen extract present in a range of about 1% to 6% by weight, and preferably in a range of about 1.8% to 2.2% by weight; coriander oil present in a range of about 0.1% to 3% by weight, and preferably in a range of about 0.38% to 0.42% by weight; and glyceryl monolaurate present in a range of about 0.1% to 0.6% by weight, and preferably in a range of about 0.38% to 0.42% by weight.

Detailed Description Paragraph Table (1):

Glycerin 48.00% Chamomile Tea 20.80% Witch Hazel 18.00% Aloe Vera 10.00% Lichen Extract 2.00% Oat Flour 0.50% Coriander Oil 0.40% Xanthan Gum 0.30%

Detailed Description Paragraph Table (2):

Glycerin 50.00% Chamomile Tea 33.95% Sodium Stearate 5.00% Witch Hazel 3.50% Aloe Vera 3.50% Lichen Extract 2.00% Oat Flour 1.25% Coriander Oil 0.40% Glyceryl Monolaurate 0.40%

CLAIMS:

a. about 1% to 6% Lichen Extract;

e. about 1% to 6% Lichen Extract;

11. The liquid roll-on deodorant composition of claim 2 containing Lichen Extract in the range of about 1.8% to 2.2%, by weight based upon total weight of the composition.

12. The liquid roll-on deodorant composition of claim 11 containing about 2.0% by weight (based upon total weight of the composition) Lichen

Extract.

f. about 1% to 6% Lichen Extract;

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File: USPT

DOCUMENT-IDENTIFIER: US 5256405 A

TITLE: Herbal deodorant

Abstract Text (1):

A stick deodorant composition that has active antibacterial constituents consisting essentially of natural materials, and that is essentially free of petroleum derived constituents and alcohols. In the preferred embodiment, the active antibacterial constituents consist essentially of about 1% to 6% (by weight) Lichen Extract, about 0.1% to 3% Coriander Oil; and about 0.1% to 0.6% Glyceryl Monolaurate.

Brief Summary Text (8):

The use of natural bactericides is known in the art. For example, Kabara U.S. Pat. No. 4,002,775 and Ulrich et al. U.S. Pat. No. 4,921,694 describe lauroyl monoesters of glycerin and synergistic mixtures having antibacterial activity. Also, EP Patent Publication No. 376761, German Patent Nos. 23 54 517, 23 51 927 and 23 51 864 and United Kingdom Patent Publication No. 1,475,226 describe the deodorizing effects of lichen acid, and especially usnic acid.

Brief Summary Text (11):

According to one aspect of the invention, in preferred embodiments, the stick deodorant composition consists essentially of the following ingredients, with the preferred ranges given by weight percent: (a) Glycerin, about 40% to 70%, preferably about 47 to 52%, and more preferably about 50%; (b) Chamomile Tea, about 20% to 60%, preferably about 32 to 36%, and more preferably about 34%; (c) Sodium Stearate, about 3% to 8%, preferably about 4.75 to 5.25%, and more preferably about 5.0%; (d) Witch Hazel, about 5% to 15%, preferably about 3.3 to 3.7%, and more preferably about 3.5%; (e) Aloe Vera, about 5% to 15%, preferably about 3.3 to 3.7%, and more preferably about 3.5%; (f) Lichen Extract, about 1% to 6%, preferably about 1.8 to 2.2%, and more preferably about 2.0%; (g) Oat Flour, about 0.1% to 3 %, preferably about 1.2 to 1.3%, and more preferably about 1.25%; (h) Coriander Oil, about 0.1% to 3%, preferably about 0.38 to 0.42%, and more preferably about 0.40%; and (i) Glyceryl Monolaurate, about 0.1% to 0.6%, preferably about 0.38 to 0.42%, and more preferably about 0.40%.

Brief Summary Text (13):

In preferred embodiments of this aspect of the invention, the stick deodorant composition consists essentially of the following ingredients, with the preferred ranges given by weight percent: (a) Lichen Extract, about 1% to 6%, preferably about 1.8 to 2.2%, and more preferably about 2.0%; (b) Coriander Oil, about 0.1% to 3%, preferably about 0.38 to 0.42%, and more preferably about 0.40%; and (c) Glyceryl Monolaurate, about 0.1% to 0.6%, preferably about 0.38 to 0.42%, and more preferably about 0.40%. The primary inactive constituent consists of glycerin. The composition is essentially free of petroleum derived constituents and alcohols.

Detailed Description Text (2):

The invention is a stearate based stick deodorant which contains natural antibacterial ingredients (lichen extract and coriander oil), and no petroleum derived ingredients or alcohol to provide gentle protection with minimal cause for skin irritation.

Detailed Description Text (4):

The natural active constituents present in the composition of the invention include coriander oil, lichen extract, and glyceryl monolaurate. Here follows a description of the interaction of the natural active constituents in accomplishing odor prevention and the role that each constituent plays based on in vivo, in vitro observations and theoretical considerations.

Detailed Description Text (5):

The preferred formulation employs coriander, lichen extract, and glyceryl monolaurate to accomplish the tasks of the deodorant, as described above.

Detailed Description Text (7):

Glyceryl monolaurate is a tranester of glycerin and the lauric acid from coconut oil. It is a gram positive specific agent and has a minimum inhibitory concentration of 0.1%, with a zone of inhibition of about 15 mm. Glyceryl monolaurate acts as an emollient, oil emulsifier, and possesses the aforementioned antibacterial qualities. It helps to enhance the efficacy of coriander by making it more water soluble, and also serves to hold the lichen extract on the skin. The antibacterial action is only a consideration when the pH of the emollient reaches the range of from 6.0 to



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ART-UNIT: 123

PRIMARY-EXAMINER: Rose; Shep K.

## ABSTRACT:

The present invention provides a water-soluble or water-dispersible particulate pharmaceutical composition comprising, per one part by weight of glycyrrhetic acid and/or glycyrrhetic acid derivative (as hereinbefore defined), 10 to 100 parts by weight of lactose and/or sorbitol, 10 to 50 parts by weight of at least one buffer selected from sodium citrate, potassium citrate, sodium tartrate, potassium tartrate, sodium malate and potassium malate and 0.1 to 10 parts by weight of disodium edetate.

6 Claims, 0 Drawing figures

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